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Rio Blanco Oil Shale Company

MODULAR DEVELOPMENT PHASE
MONITORING REPORT FIVE

Volume 3 of 3

December 1978 – November 1979
Year End Report

Gulf Oil Corporation / Standard Oil Company (Indiana)
A General Partnership
9725 East Hampden Avenue, Denver, Colorado 80231

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RIO BLANCO OIL SHALE COMPANY
MODULAR DEVELOPMENT PHASE
MONITORING REPORT 5

December 1978 - November 1979

YEAR-END REPORT

Prepared by:
RIO BLANCO OIL SHALE COMPANY
DENVER, COLORADO

March 31, 1980

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Aquatic Data

APPENDIX 4-1

Species Composition of Periphyton at each Sampling Station
over all Sampling Periods for 1979

PERIPHYTON SPECIES LIST
RMOSC AQUATIC STUDIES
1979

TAXON	STATION NUMBER 13	14	20	21	27	29
CHRYSOPHYTA						
ACHNANTHES LANCEOLATA	X	X	X	X	X	X
ACHNANTHES LINEARIS				X	X	
ACHNANTHES MICROCEPHALA					X	
ACHNANTHES SPP.	X	X	X	X	X	X
AMPHORA COFFEIFORMIS				X		
AMPHORA OVALIS	X	X	X	X	X	X
AMPHORA PERPUSILLA				X	X	X
AMPHORA VENETA	X					
BICOECA LACUSTRIS		X				
CALONEIS AMPHISBAENA	X	X	X	X	X	X
COCCONEIS PEDICULUS	X	X		X	X	X
COCCONEIS PLACENTULA		X	X	X	X	X
CYCLOTELLA BODANICA						X
CYCLOTELLA MENEGHENIANA		X	X	X	X	X
CYMATOPLEURA SOLEA					X	
CYMBELLA AFFINIS	X	X	X	X	X	X
CYMBELLA AMPHICEPHALA	X					
CYMBELLA CISTULA		X	X	X		
CYMBELLA CYMBIFORMIS	X	X	X	X	X	
CYMBELLA MEXICANA						X
CYMBELLA MICROCEPHALA	X					
CYMBELLA MINUTA	X	X	X	X	X	X
CYMBELLA MINUTA VAR. SILESIACA		X	X	X	X	X
CYMBELLA SINUATA					X	X
CYMBELLA SPP.			X			X
DIATOMA TENUE VAR. ELONGATUM		X	X	X	X	
DIATOMA VULGARE				X	X	X
DIATOMA SPP.	X					
DIATOMA VULGARE VAR. GRANDE		X				
DIATOMA HIEMALE	X					
DIATOMA VULGARE VAR. GRANDE		X				
ENTOMONEIS PALLUDOSA		X	X	X	X	X
EPITHEMIA SOREX	X		X	X	X	X
EPITHEMIA SPP.				X		
EPITHEMIA TURGIDA					X	X
FRAGILARIA CAPUCINA		X	X	X		
FRAGILARIA CONSTRUENS				X	X	
FRAGELARIA CAPUCINA		X		X		X
FRAGILARIA LEPTOSTAURON						X
FRAGILARIA PINNATA		X	X			X
FRAGILARIA SPP.	X	X				X
FRAGILARIA VAUCHERIAE	X	X	X	X	X	X
GOMPHONEIS HERCULEANA						X
GOMPHONEMA AFFINE		X				
GOMPHONEMA ANGUSTATUM	X	X	X	X	X	X
GOMPHONEMA CLEVEI					X	X
GOMPHONEMA GRACILE			X		X	
GOMPHONEMA INTRICATUM		X	X		X	X
GOMPHONEMA OLIVACEUM	X		X	X	X	X
GOMPHONEMA PARVULUM	X	X	X	X	X	X
GOMPHONEMA SUBCLAVATUM			X			
GOMPHONEMA SUBCLAVATUM VAR. MEXICANUM		X				

GOMPHONEMA TERGESTINUM				X		
GOMPHONEMA TRUNCATUM						X
GOMPHONEMA SPP.		X	X	X	X	X
GYROSIGMA SPENCERII		X	X	X	X	X
HANNAEA ARCUS					X	X
HANTZSCHIA AMPHIOXYS	X	X	X	X	X	X
MASTOGLOIA ELLIPTICA			X	X		
MERIDION CIRCULARE	X	X			X	
NAVICULA ARVENSIS	X	X	X	X	X	X
NAVICULA CAPITATA					X	
NAVICULA CINCTA				X		
NAVICULA CRYPTOCEPHALA	X	X	X	X	X	X
NAVICULA CRYPTOCEPHALA VAR. VENETA	X	X	X	X	X	X
NAVICULA CUSPIDATA		X	X	X		X
NAVICULA HALOPHILA			X			
NAVICULA HEUFLERI	X	X	X	X	X	
NAVICULA MUTICA				X		
NAVICULA NOTHA		X	X		X	X
NAVICULA PUPULA			X		X	
NAVICULA PELLICULOSA	X	X	X	X	X	X
NAVICULA RYGMAEA	X	X	X	X	X	
NAVICULA RADIOSA					X	X
NAVICULA RHYNCHOCEPHALA			X			
NAVICULA SALINARUM VAR. INTERMEDIA					X	X
NAVICULA SECRETA VAR. APICULATA	X	X	X	X	X	X
NAVICULA SUBHAMULATA					X	
NAVICULA TRIPUNCTATA	X		X	X	X	X
NAVICULA VIRIDULA	X	X	X	X	X	X
NAVICULA SPP.	X	X	X	X	X	X
NITZSCHIA ACICULARIS	X	X	X	X	X	
NITZSCHIA ACUTA		X				
NITZSCHIA AMPHIBIA		X				
NITZSCHIA APICULATA	X	X	X	X	X	X
NITZSCHIA CLAUSII			X			
NITZSCHIA DENTICULA	X	X	X	X		
NITZSCHIA DISSIPATA	X	X	X	X	X	X
NITZSCHIA EPITHEMOIDES	X					
NITZSCHIA FONTICOLA	X	X	X	X	X	X
NITZSCHIA FRUSTULUM	X	X	X	X	X	X
NITZSCHIA GRACILIS				X		
NITZSCHIA HOLSATICA	X	X	X	X	X	X
NITZSCHIA HUNGARICA		X	X	X		
NITZSCHIA IGNORATA					X	
NITZSCHIA LATENS	X	X	X	X	X	X
NITZSCHIA LINEARIS	X	X	X	X	X	X
NITZSCHIA MICROCEPHALA		X	X	X	X	X
NITZSCHIA PALEA	X	X	X	X	X	X
NITZSCHIA SIGMA					X	
NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS	X		X	X		
NITZSCHIA SPP.	X	X	X	X	X	X
NITZSCHIA VITREA	X	X			X	
NITZSCHIA SP. #1		X	X	X	X	X
PINNULARIA BICEPS		X				
PINNULARIA BOREALIS	X		X	X		
PINNULARIA BREBISSONII	X	X	X	X		
PINNULARIA MAIOR		X				
PINNULARIA SPP.	X	X	X	X	X	
PLEUROSIGMA DELICATISSIMA		X	X	X	X	
RHOPALODIA GIBBA	X	X	X	X	X	X
RHOICOSPHENIA CURVATA				X	X	X
RHOPALODIA GIBBERULA		X	X	X	X	
STEPHANODISCUS HANTZSCHII				X	X	
SURIRELLA ANGUSTATA					X	
SURIRELLA LINEARIS			X			
SURIRELLA OVATA	X	X	X	X	X	X
SURIRELLA OVALIS	X	X	X	X	X	X
SURIRELLA SPP.			X			
SYNEDRA AMPHICEPHALA			X	X		

SYNEDRA DELICATISSIMA		X			X	
SYNEDRA FAMELICA	X	X	X	X		X
SYNEDRA FASCICULATA	X	X	X	X		
SYNEDRA INCISA		X	X	X		
SYNEDRA PULCHELLA			X	X	X	
SYNEDRA RADIANS	X	X	X	X		
SYNEDRA SPP.	X	X	X	X	X	
SYNEDRA ULNA	X	X	X	X	X	X
THALASSIOSIRA FLUVIATILIS		X	X	X		X
UNIDENTIFIED CENTRIC DIATOMS			X			X
UNIDENTIFIED PENNATE DIATOMS	X	X	X	X	X	X
CHLOROPHYTA						
BULBOCHAETAE SPP.			X	X		X
CHARACIUM SP.		X				
CHLAMYDOMONAS SPP.				X		
CLADOPHORA SPP.		X		X	X	X
CLOSTERIUM SPP.	X	X				
COSMARIUM SPP.		X				
GLOEOCYSTIS SPP.			X	X		
MOUGEOTIA SPP.	X	X	X	X	X	X
OEDOGONIUM SPP.		X				
SCENEDESMUS ACUTUS VAR. GLOBOSIS		X				
SCENEDESMUS INCRASSATULUS		X				
SCENEDESMUS SPP.		X				
SPIROGYRA SPP.		X				
STIGEOCLONIUM SPP.	X	X	X	X	X	X
ULOTHRIX SPP.		X				
UNIDENTIFIED CHLOROPHYTAN CELL			X	X		
CYANOPHYTA						
ANABAENA SPP.				X	X	X
APHANOTHECE SPP.			X			
CALOTHRIX SPP.				X	X	X
DACTYLOCOCCOPSIS SPP.				X		
LYNGBYA SPP.	X		X		X	X
MERISMOPEDIA PUNCTATA		X	X	X		
SPIRULINA SPP.					X	
ENTOPHYSALIS RIVULARIS		X		X		
MICROCYSTIS INCERTA		X				
OSCILLATORIA PSEUDOGEMINATA	X			X	X	
OSCILLATORIA SPP.	X		X	X	X	X
PHORMIDIUM SPP.	X	X	X	X	X	X
EUGLENOPHYTA						
EUGLENA SPP.			X	X		X
PHACUS SPP.		X		X		X

X = TAXON OBSERVED AT SAMPLING STATION

APPENDIX 4-2

Seasonal Changes in Periphyton Species Composition
at each Sampling Station in 1979

PERIPHYTON SPECIES LIST
RMOSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 13
1979

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
CHRYSOPHYTA						
ACHNANTHES LANCEOLATA	X	X	X	X		
ACHNANTHES SPP.	X	X	X	X	X	X
AMPHORA OVALIS	X	X				
AMPHORA VENETA	X					X
CALONEIS AMPHISBAENA	X					X
COCCONEIS PEDICULUS	X					
CYMBELLA AFFINIS				X		X
CYMBELLA AMPHICEPHALA	X	X				
CYMBELLA CYMBIFORMIS	X	X		X	X	
CYMBELLA MICROCEPHALA					X	
CYMBELLA MINUTA			X			X
DIATOMA SPP.	X					
DIATOMA HIEMALE					X	
EPITHEMIA SOREX	X	X		X		
FRAGILARIA SPP.					X	
FRAGILARIA VAUCHERIAE	X	X	X	X	X	X
GOMPHONEMA ANGUSTATUM	X	X	X	X	X	
GOMPHONEMA OLIVACEUM	X					
GOMPHONEMA PARVULUM	X			X	X	
HANTZSCHIA AMPHIOXYS	X	X			X	
MERIDION CIRCULARE	X					
NAVICULA ARVENSIS	X	X	X	X		
NAVICULA CRYPTOCEPHALA	X					
NAVICULA CRYPTOCEPHALA VAR. VENETA	X	X	X	X	X	X
NAVICULA HEUFLERI	X	X	X			
NAVICULA PELLICULOSA	X	X	X	X		
NAVICULA PYGMAEA	X					
NAVICULA SECRETA VAR. APICULATA	X	X	X	X		
NAVICULA TRIPUNCTATA	X					
NAVICULA VIRIDULA	X	X	X	X	X	X
NAVICULA SPP.			X		X	X
NITZSCHIA ACICULARIS			X			
NITZSCHIA APICULATA	X	X	X	X		X
NITZSCHIA DENTICULA	X	X			X	
NITZSCHIA DISSIPATA	X	X	X			
NITZSCHIA ERITHEMOIDES			X			
NITZSCHIA FONTICOLA	X	X	X		X	
NITZSCHIA FRUSTULUM	X	X	X			
NITZSCHIA HOLSATICA	X	X	X			
NITZSCHIA LATENS	X					
NITZSCHIA LINEARIS	X	X	X	X	X	
NITZSCHIA PALEA	X	X				
NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS	X					
NITZSCHIA SPP.	X	X	X	X		X
NITZSCHIA VITREA						X
PINNULARIA BOREALIS	X					
PINNULARIA BREBISSONII	X	X	X			
PINNULARIA SPP.	X					
RHOPALODIA GIBBA	X		X	X		
SURIRELLA OVATA	X		X	X		X
SURIRELLA OVALIS		X	X	X	X	X

SYNEDRA FAMELICA	X		X		X		X						
SYNEDRA FASCICULATA	X				X		X						
SYNEDRA RADIANS													X
SYNEDRA SPP.					X								
SYNEDRA ULNA	X										X		
UNIDENTIFIED PENNATE DIATOMS	X		X		X		X						
CHLOROPHYTA													
CLOSTERIUM SPP.													X
MOUGEOTIA SPP.													X
STIGEOCLONIUM SPP.								X			X		X
CYANOPHYTA													
LYNGBYA SPP.					X						X		
OSCILLATORIA PSEUDOGEMINATA					X								
OSCILLATORIA SPP.					X								
PHORMIDIUM SPP.	X		X		X		X				X		X
EUGLENOPHYTA													

X = TAXON OBSERVED AT SAMPLING STATION

PERIPHYTON SPECIES LIST
R9QSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 14
1979

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
CHRYSOPHYTA						
ACHNANTHES LANCEOLATA	X	X	X	X	X	X
ACHNANTHES SPP.	X	X	X	X	X	X
AMPHORA OVALIS	X	X	X	X	X	X
BICOECA LACUSTRIS		X				
CALONEIS AMPHISBAENA			X	X	X	X
COCCONEIS PEDICULUS	X					
COCCONEIS PLACENTULA	X		X	X		X
CYCLOTELLA MENEGHENIANA	X	X	X	X	X	X
CYMBELLA AFFINIS	X	X	X	X	X	X
CYMBELLA CISTULA			X			
CYMBELLA CYMBIFORMIS	X	X	X	X	X	X
CYMBELLA MINUTA	X	X	X	X	X	X
CYMBELLA MINUTA VAR. SILESIACA		X	X	X	X	
DIATOMA TENUE VAR. ELONGATUM	X			X	X	X
DIATOMA VULGARE VAR. GRANDE					X	
DIATOMA VULGARE VAR. GRANDE			X	X		
ENTOMONEIS PALLUDOSA				X		X
FRAGILARIA CAPUCINA					X	X
FRAGILARIA CAPUCINA	X	X	X	X	X	
FRAGILARIA PINNATA				X	X	X
FRAGILARIA SPP.			X			
FRAGILARIA VAUCHERIAE	X	X	X	X	X	X
GOMPHONEMA AFFINE					X	
GOMPHONEMA ANGUSTATUM	X	X	X	X	X	X
GOMPHONEMA INTRICATUM	X					
GOMPHONEMA PARVULUM	X		X	X	X	X
GOMPHONEMA SUBCLAVATUM VAR. MEXICANUM			X			
GOMPHONEMA SPP.			X	X	X	
GYROSIGMA SPENCERII	X	X	X	X	X	X
HANTZSCHIA AMPHIOXYS	X		X	X		
MERIDION CIRCULARE	X		X			
NAVICULA ARVENSIS	X	X	X	X		X
NAVICULA CRYPTOCEPHALA			X			
NAVICULA CRYPTOCEPHALA VAR. VENETA	X	X	X	X	X	X
NAVICULA CUSPIDATA	X	X	X	X	X	X
NAVICULA HEUFLERI	X	X	X	X		X
NAVICULA NOTHA						X
NAVICULA PELLICULOSA	X	X		X	X	X
NAVICULA PYGMAEA			X			
NAVICULA SECRETA VAR. APICULATA	X	X	X	X	X	X
NAVICULA VIRIDULA	X	X		X	X	X
NAVICULA SPP.			X			
NITZSCHIA ACICULARIS	X	X	X	X		X
NITZSCHIA ACUTA			X			
NITZSCHIA AMPHIBIA	X					
NITZSCHIA APICULATA	X	X		X	X	X
NITZSCHIA DENTICULA	X	X	X	X	X	X
NITZSCHIA DISSIPATA	X			X		
NITZSCHIA FONTICOLA	X	X	X	X	X	X
NITZSCHIA FRUSTULUM	X	X	X	X	X	X
NITZSCHIA HOLSATICA	X	X	X	X	X	

NITZSCHIA HUNGARICA			X			
NITZSCHIA LATENS	X					
NITZSCHIA LINEARIS	X	X	X	X		X
NITZSCHIA MICROCEPHALA		X		X	X	
NITZSCHIA PALEA			X	X		
NITZSCHIA SPP.	X		X	X	X	X
NITZSCHIA VITREA					X	
NITZSCHIA SP. #1						X
PINNULARIA BICEPS	X					
PINNULARIA BREBISSONII	X		X	X		X
PINNULARIA MAIOR			X			
PINNULARIA SPP.			X	X		X
PLEUROSIGMA DELICATISSIMA			X			
RHOPALODIA GIBBA	X		X			
RHOPALODIA GIBBERULA				X		
SURIRELLA OVATA	X	X	X	X	X	X
SURIRELLA OVALIS	X		X	X	X	X
SYNEDRA DELICATISSIMA				X		
SYNEDRA FAMELICA	X	X	X	X	X	X
SYNEDRA FASCICULATA	X	X	X	X	X	X
SYNEDRA INCISA				X		
SYNEDRA RADIANS						X
SYNEDRA SPP.					X	
SYNEDRA ULNA	X	X	X	X	X	X
THALASSIOSIRA FLUVIATILIS			X			X
UNIDENTIFIED PENNATE DIATOMS	X	X	X	X	X	X
CHLOROPHYTA						
CHARACIUM SP.						X
CLADOPHORA SPP.		X				
CLOSTERIUM SPP.	X			X	X	X
COSMARIUM SPP.			X			
MOUGEOTIA SPP.	X		X	X	X	X
OEDOGONIUM SPP.			X	X		
SCENEDESMUS ACUTUS VAR. GLOBOSIS	X					
SCENEDESMUS INCRASSATULUS					X	
SCENEDESMUS SPP.				X		
SPIROGYRA SPP.						X
STIGEOCLONIUM SPP.	X	X			X	X
ULOTHRIX SPP.	X		X			
CYANOPHYTA						
MERISMOPEDIA PUNCTATA						X
ENTOPHYSALIS RIVULARIS	X					
MICROCYSTIS INCERTA	X					
PHORMIDIUM SPP.	X	X				X
EUGLENOPHYTA						
PHACUS SPP.	X				X	

X = TAXON OBSERVED AT SAMPLING STATION

PERIPHYTON SPECIES LIST
RBOSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 20
1979

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
CHRYSOPHYTA						
ACHNANTHES LANCEOLATA	X	X	X		X	
ACHNANTHES SPP.	X	X	X	X	X	X
AMPHORA OVALIS					X	
CALONEIS AMPHISBAENA	X	X	X	X	X	X
COCCONEIS PLACENTULA	X					X
CYCLOTELLA MENEGHENIANA		X	X	X	X	X
CYMBELLA AFFINIS		X			X	
CYMBELLA CISTULA			X			
CYMBELLA CYMBIFORMIS					X	
CYMBELLA MINUTA	X	X			X	X
CYMBELLA MINUTA VAR. SILESIACA	X	X	X	X	X	X
CYMBELLA SPP.					X	
DIATOMA TENUE VAR. ELONGATUM				X		
ENTOMONEIS PALLUDOSA	X	X	X		X	X
EPITHEMIA SOREX			X	X	X	X
FRAGILARIA CAPUCINA					X	
FRAGILARIA PINNATA					X	
FRAGILARIA VAUCHERIAE	X	X	X	X	X	X
GOMPHONEMA ANGUSTATUM	X	X		X	X	X
GOMPHONEMA GRACILE	X				X	
GOMPHONEMA INTRICATUM	X					
GOMPHONEMA OLIVACEUM	X	X	X			
GOMPHONEMA PARVULUM	X				X	
GOMPHONEMA SUBCLAVATUM				X		
GOMPHONEMA SPP.			X	X		
GYROSIGMA SPENCERII	X		X	X	X	X
HANTZSCHIA AMPHIOXYS	X			X	X	X
MASTOGLOIA ELLIPTICA				X	X	
NAVICULA ARVENSIS	X	X	X			
NAVICULA CRYPTOCEPHALA	X	X	X		X	X
NAVICULA CRYPTOCEPHALA VAR. VENETA	X	X	X	X	X	X
NAVICULA CUSPIDATA	X	X			X	
NAVICULA HALOPHILA			X			
NAVICULA HEUFLERI	X	X	X		X	
NAVICULA NOTHA					X	
NAVICULA PUPULA	X					
NAVICULA PELLICULOSA	X	X	X	X	X	X
NAVICULA PYGMAEA	X					
NAVICULA RHYNCHOCEPHALA	X					
NAVICULA SECRETA VAR. APICULATA	X	X	X	X	X	X
NAVICULA TRIPUNCTATA	X	X	X	X	X	
NAVICULA VIRIDULA	X	X	X	X	X	X
NAVICULA SPP.			X		X	X
NITZSCHIA ACICULARIS						X
NITZSCHIA APICULATA	X	X	X	X	X	X
NITZSCHIA CLAUSII					X	
NITZSCHIA DENTICULA				X	X	
NITZSCHIA DISSIPATA	X	X	X			
NITZSCHIA FONTICOLA	X	X	X	X	X	X
NITZSCHIA FRUSTULUM	X	X	X		X	
NITZSCHIA HOLSATICA	X	X	X	X	X	

NITZSCHIA HUNGARICA											X	
NITZSCHIA LATENS	X		X		X				X			
NITZSCHIA LINEARIS	X		X		X		X		X		X	
NITZSCHIA MICROCEPHALA			X		X		X		X		X	
NITZSCHIA PALEA			X		X		X		X			
NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS	X				X							
NITZSCHIA SPP.	X		X		X		X		X		X	
NITZSCHIA SP. #1									X		X	
PINNULARIA BOREALIS									X			
PINNULARIA BREBISSONII	X		X									
PINNULARIA SPP.	X								X			
PLEUROSIGMA DELICATISSIMA			X								X	
RHOPALODIA GIBBA							X					
RHOPALODIA GIBBERULA							X		X		X	
SURIRELLA LINEARIS	X											
SURIRELLA OVATA	X		X		X		X		X		X	
SURIRELLA OVALIS	X		X		X		X		X		X	
SURIRELLA SPP.	X											
SYNEDRA AMPHICEPHALA	X											
SYNEDRA FAMELICA	X		X				X		X			
SYNEDRA FASCICULATA	X		X				X		X		X	
SYNEDRA INCISA	X											
SYNEDRA PULCHELLA					X		X		X		X	
SYNEDRA RADIANS											X	
SYNEDRA SPP.					X		X					
SYNEDRA ULNA	X						X		X			
THALASSIOSIRA FLUVIATILIS									X			
UNIDENTIFIED CENTRIC DIATOMS									X			
UNIDENTIFIED PENNATE DIATOMS	X		X		X		X		X		X	
CHLOROPHYTA												
BULBOCHAETAE SPP.					X		X					
GLOEOCYSTIS SPP.					X							
MOUGEOTIA SPP.					X		X		X			
STIGEOCLONIUM SPP.	X				X						X	
UNIDENTIFIED CHLOROPHYTAN CELL									X			
CYANOPHYTA												
APHANOTHECE SPP.					X							
LYNGBYA SPP.											X	
MERISMOPEDIA PUNCTATA											X	
OSCILLATORIA SPP.									X			
PHORMIDIUM SPP.			X		X		X		X		X	
EUGLENOPHYTA												
EUGLENA SPP.	X											

X = TAXON OBSERVED AT SAMPLING STATION

PERIPHYTON SPECIES LIST
RHOSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 21
1979

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
CHRYSOPHYTA						
ACHNANTHES LANCEOLATA	X		X			
ACHNANTHES LINEARIS	X					
ACHNANTHES SPP.	X	X	X	X	X	X
AMPHORA COFFEIFORMIS					X	
AMPHORA OVALIS	X	X			X	
AMPHORA PERPUSILLA					X	
CALONEIS AMPHISBAENA		X	X	X		
COCCONEIS PEDICULUS	X					
COCCONEIS PLACENTULA	X			X		
CYCLOTELLA MENEGHENIANA	X	X	X	X	X	X
CYMBELLA AFFINIS						X
CYMBELLA CISTULA				X		
CYMBELLA CYMBIFORMIS	X			X	X	
CYMBELLA MINUTA	X		X		X	X
CYMBELLA MINUTA VAR. SILESIACA	X	X	X	X		
DIATOMA TENUE VAR. ELONGATUM	X					
DIATOMA VULGARE					X	
ENTOMONEIS PALLUDOSA	X	X	X	X	X	X
EPITHEMIA SOREX					X	X
EPITHEMIA SPP.			X			
FRAGILARIA CAPUCINA					X	
FRAGILARIA CONSTRUENS	X					
FRAGELARIA CAPUCINA	X					
FRAGILARIA VAUCHERIAE	X	X	X	X		X
GOMPHONEMA ANGUSTATUM	X	X			X	
GOMPHONEMA OLIVACEUM	X	X	X			
GOMPHONEMA PARVULUM	X				X	
GOMPHONEMA TERGESTINUM	X					
GOMPHONEMA SPP.		X	X	X		
GYROSIGMA SPENCERII	X	X	X	X	X	X
HANTZSCHIA AMPHIOXYS				X	X	X
MASTOGLOIA ELLIPTICA				X	X	
NAVICULA ARVENSIS	X	X				
NAVICULA CINCTA					X	
NAVICULA CRYPTOCEPHALA	X		X		X	X
NAVICULA CRYPTOCEPHALA VAR. VENETA		X	X	X	X	X
NAVICULA CUSPIDATA				X		X
NAVICULA HEUFLERI	X	X			X	
NAVICULA MUTICA	X					
NAVICULA PELLICULOSA	X	X	X	X	X	
NAVICULA PYGMAEA			X			
NAVICULA SECRETA VAR. APICULATA	X	X	X	X		
NAVICULA TRIPUNCTATA	X	X		X	X	
NAVICULA VIRIDULA	X		X	X	X	X
NAVICULA SPP.	X		X	X		X
NITZSCHIA ACICULARIS						X
NITZSCHIA APICULATA	X	X	X	X	X	X
NITZSCHIA DENTICULA			X			
NITZSCHIA DISSIPATA	X	X				
NITZSCHIA FONTICOLA	X	X	X	X	X	X
NITZSCHIA FRUSTULUM	X	X	X	X		

NITZSCHIA GRACILIS				X		
NITZSCHIA HOLSATICA	X	X	X	X	X	
NITZSCHIA HUNGARICA						X
NITZSCHIA LATENS	X	X	X	X		
NITZSCHIA LINEARIS	X		X	X		X
NITZSCHIA MICROCEPHALA	X	X	X	X	X	X
NITZSCHIA PALEA	X		X			
NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS		X	X			
NITZSCHIA SPP.	X	X	X	X	X	X
NITZSCHIA SP. #1			X		X	X
PINNULARIA BOREALIS	X				X	
PINNULARIA BREBISSONII	X	X		X		
PINNULARIA SPP.	X					X
PLEUROSIGMA DELICATISSIMA						X
RHOPALODIA GIBBA						X
RHOICOSPHENIA CURVATA	X	X				
RHOPALODIA GIBBERULA			X	X	X	
STEPHANODISCUS HANTZSCHII						X
SURIRELLA OVATA	X	X	X	X	X	X
SURIRELLA OVALIS	X	X	X	X	X	X
SYNEDRA AMPHICEPHALA	X					
SYNEDRA FAMELICA	X	X	X			
SYNEDRA FASCICULATA					X	
SYNEDRA INCISA	X					
SYNEDRA PULCHELLA			X	X	X	X
SYNEDRA RADIANS			X			X
SYNEDRA SPP.				X		X
SYNEDRA ULNA	X					
THALASSIOSIRA FLUVIATILIS					X	
UNIDENTIFIED PENNATE DIATOMS	X	X	X	X	X	X
CHLOROPHYTA						
BULBOCHAETAE SPP.			X	X		X
CHLAMYDOMONAS SPP.		X				
CLADOPHORA SPP.				X		
GLOEOCYSTIS SPP.			X			
MOUGEOTIA SPP.			X	X		
STIGEOCLONIUM SPP.	X	X	X		X	
UNIDENTIFIED CHLOROPHYTAN CELL					X	
CYANOPHYTA						
ANABAENA SPP.			X		X	
CALOTHRIX SPP.				X	X	X
DACTYLOCOCCOPSIS SPP.			X		X	
MERISMOPEDIA PUNCTATA						X
ENTOPHYSALIS RIVULARIS				X		
OSCILLATORIA PSEUDOGEMINATA				X		
OSCILLATORIA SPP.			X		X	X
PHORMIDIUM SPP.	X	X	X	X	X	X
EUGLENOPHYTA						
EUGLENA SPP.	X					
PHACUS SPP.		X				

X = TAXON OBSERVED AT SAMPLING STATION

PERIPHYTON SPECIES LIST
RBOSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 27
1979

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
CHRYSOPHYTA						
ACHNANTHES LANCEOLATA	X			X		
ACHNANTHES LINEARIS	X					
ACHNANTHES MICROCEPHALA	X					
ACHNANTHES SPP.	X			X	X	X
AMPHORA OVALIS	X					
AMPHORA PERPUSILLA	X			X	X	X
CALONEIS AMPHISBAENA						X
COCCONEIS PEDICULUS	X			X	X	X
COCCONEIS PLACENTULA	X			X	X	X
CYCLOTELLA MENEGHENIANA				X	X	X
CYMATOPLEURA SOLEA				X		X
CYMBELLA AFFINIS	X			X	X	X
CYMBELLA CYMBIFORMIS				X	X	X
CYMBELLA MINUTA	X			X	X	
CYMBELLA MINUTA VAR. SILESIACA				X		
CYMBELLA SINUATA	X			X	X	X
DIATOMA TENUE VAR. ELONGATUM						X
DIATOMA VULGARE	X			X	X	X
ENTOMONEIS PALLUDOSA				X		
EPITHEMIA SOREX	X			X	X	X
EPITHEMIA TURGIDA	X					X
FRAGILARIA CONSTRUENS	X					
FRAGILARIA VAUCHERIAE	X			X		
GOMPHONEMA ANGUSTATUM	X			X	X	
GOMPHONEMA CLEVEI	X			X		
GOMPHONEMA GRACILE				X		
GOMPHONEMA INTRICATUM				X	X	X
GOMPHONEMA OLIVACEUM	X			X		
GOMPHONEMA PARVULUM	X			X	X	X
GOMPHONEMA SPP.				X		
GYROSIGMA SPENCERII	X			X	X	X
HANNAEA ARCUS						X
HANTZSCHIA AMPHIOXYS				X		X
MERIDION CIRCULARE				X		
NAVICULA ARVENSIS				X	X	
NAVICULA CAPITATA	X					
NAVICULA CRYPTOCEPHALA	X					
NAVICULA CRYPTOCEPHALA VAR. VENETA	X			X	X	X
NAVICULA HEUFLERI				X		
NAVICULA NOTHA				X	X	X
NAVICULA PUPULA						X
NAVICULA PELLICULOSA	X			X		
NAVICULA PYGMAEA				X		
NAVICULA RADIOSA				X	X	
NAVICULA SALINARUM VAR. INTERMEDIA	X			X	X	X
NAVICULA SECRETA VAR. APICULATA	X			X	X	
NAVICULA SUBHAMULATA				X		
NAVICULA TRIPUNCTATA	X			X	X	X
NAVICULA VIRIDULA	X			X	X	X
NAVICULA SPP.	X			X	X	
NITZSCHIA ACICULARIS				X		

NITZSCHIA APICULATA		X		X
NITZSCHIA DISSIPATA	X	X	X	X
NITZSCHIA FONTICOLA	X	X	X	X
NITZSCHIA FRUSTULUM	X	X		
NITZSCHIA HOLSATICA	X	X		
NITZSCHIA IGNORATA	X			
NITZSCHIA LATENS		X		
NITZSCHIA LINEARIS				X
NITZSCHIA MICROCEPHALA		X	X	X
NITZSCHIA PALEA		X		
NITZSCHIA SIGMA			X	X
NITZSCHIA SPP.	X	X	X	X
NITZSCHIA VITREA		X		
NITZSCHIA SP. #1			X	X
PINNULARIA SPP.	X			
PLEUROSIGMA DELICATISSIMA				X
RHOPALODIA GIBBA	X		X	X
RHOICOSPHENIA CURVATA	X	X	X	X
RHOPALODIA GIBBERULA		X		X
STEPHANODISCUS HANTZSCHII		X		
SURIRELLA ANGUSTATA		X		
SURIRELLA OVATA	X	X		X
SURIRELLA OVALIS		X		
SYNEDRA DELICATISSIMA		X		
SYNEDRA PULCHELLA			X	
SYNEDRA SPP.				X
SYNEDRA ULNA	X	X	X	X
UNIDENTIFIED PENNATE DIATOMS	X	X	X	X
CHLOROPHYTA				
CLADOPHORA SPP.	X	X		X
MOUGEOTIA SPP.		X		
STIGEOCLONIUM SPP.	X	X	X	X
CYANOPHYTA				
ANABAENA SPP.			X	
CALOTHRIX SPP.		X	X	X
LYNGBYA SPP.		X	X	X
SPIRULINA SPP.		X		
OSCILLATORIA PSEUDOGEMINATA	X			
OSCILLATORIA SPP.		X	X	X
PHORMIDIUM SPP.	X	X	X	X
EUGLENOPHYTA				

X = TAXON OBSERVED AT SAMPLING STATION

PERIPHYTON SPECIES LIST
RBOSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 29
1979

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
CHRYSOPHYTA						
ACHNANTHES LANCEOLATA	X			X		
ACHNANTHES SPP.	X			X	X	X
AMPHORA OVALIS	X					
AMPHORA PERPUSILLA	X			X	X	X
CALONEIS AMPHISBAENA				X	X	X
COCCONEIS PEDICULUS	X				X	X
COCCONEIS PLACENTULA	X			X	X	X
CYCLOTELLA BODANICA	X					
CYCLOTELLA MENEGHENIANA				X	X	X
CYMBELLA AFFINIS	X			X	X	X
CYMBELLA MEXICANA	X					
CYMBELLA MINUTA	X			X	X	X
CYMBELLA MINUTA VAR. SILESIACA				X		
CYMBELLA SINUATA	X			X	X	X
CYMBELLA SPP.						X
DIATOMA VULGARE	X			X	X	X
ENTOMONEIS PALLUDOSA					X	X
EPITHEMIA SOREX	X			X	X	X
EPITHEMIA TURGIDA					X	X
FRAGELARIA CAPUCINA	X					
FRAGILARIA LEPTOSTAURON	X					
FRAGILARIA PINNATA				X		
FRAGILARIA SPP.					X	
FRAGILARIA VAUCHERIAE	X			X		X
GOMPHONEIS HERCULEANA						X
GOMPHONEMA ANGUSTATUM	X					
GOMPHONEMA CLEVEI	X					X
GOMPHONEMA INTRICATUM				X	X	X
GOMPHONEMA OLIVACEUM	X			X	X	X
GOMPHONEMA PARVULUM	X			X	X	X
GOMPHONEMA TRUNCATUM						X
GOMPHONEMA SPP.				X		X
GYROSIGMA SPENCERII					X	X
HANNAEA ARCUS	X					
HANTZSCHIA AMPHIOXYS					X	
NAVICULA ARVENSIS				X	X	
NAVICULA CRYPTOCEPHALA	X			X	X	
NAVICULA CRYPTOCEPHALA VAR. VENETA	X			X	X	X
NAVICULA CUSPIDATA	X					
NAVICULA NOTHA				X	X	X
NAVICULA PELLICULOSA	X			X	X	
NAVICULA RADIOSA				X		
NAVICULA SALINARUM VAR. INTERMEDIA				X		X
NAVICULA SECRETA VAR. APICULATA	X			X	X	X
NAVICULA TRIPUNCTATA	X			X	X	X
NAVICULA VIRIDULA	X			X	X	X
NAVICULA SPP.	X			X		
NITZSCHIA APICULATA				X		X
NITZSCHIA DISSIPATA	X			X	X	X
NITZSCHIA FONTICOLA	X			X	X	X
NITZSCHIA FRUSTULUM	X			X		

NITZSCHIA HOLSATICA	X		X			X
NITZSCHIA LATENS						X
NITZSCHIA LINEARIS	X		X		X	X
NITZSCHIA MICROCEPHALA					X	X
NITZSCHIA PALEA	X					
NITZSCHIA SPP.	X		X		X	X
NITZSCHIA SP. #1					X	X
RHOPALODIA GIBBA					X	X
RHOICOSPHENIA CURVATA	X		X		X	X
SURIRELLA OVATA	X		X			X
SURIRELLA OVALIS	X				X	X
SYNEDRA FAMELICA					X	
SYNEDRA ULNA	X		X		X	X
THALASSIOSIRA FLUVIATILIS					X	
UNIDENTIFIED CENTRIC DIATOMS	X					
UNIDENTIFIED PENNATE DIATOMS	X		X		X	X
CHLOROPHYTA						
BULBOCHAETAE SPP.			X			
CLADOPHORA SPP.					X	X
MOUGEOTIA SPP.						X
STIGEOCLONIUM SPP.	X				X	
CYANOPHYTA						
ANABAENA SPP.					X	
CALOTHRIX SPP.			X		X	X
LYNGBYA SPP.			X		X	X
OSCILLATORIA SPP.	X		X		X	X
PHORMIDIUM SPP.	X		X		X	X
EUGLENOPHYTA						
EUGLENA SPP.						X
PHACUS SPP.	X					

X = TAXON OBSERVED AT SAMPLING STATION

APPENDIX 4-3

Periphyton Enumeration Data for all Stations by Sampling Date for 1979

APRIL

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 13
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 042579
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.4320	.2340	1.2200	2.8300
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF DROPS	10	10	10	10

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA	P	1	2	3
1ACMIN	ACHNANTHES SPP.	113	102	14	43
1AMOVP	AMPHORA OVALIS	P			
1AMVEN	AMPHORA VENETA	P		P	
1CAAMP	CALONEIS AMPHISBAENA			P	
1COCPE	COCCONEIS PEDICULUS	P	P		
1CYMAM	CYMBELLA AMPHICEPHALA	P		P	P
1CYMCY	CYMBELLA CYMBIFORMIS	P	P		P
1DISPP	DIATOMA SPP.			1	P
1EPSOR	EPITHEMIA SOREX	P	P		
1FRAVA	FRAGILARIA VAUCHERIAE	7	45	100	3
1GOANG	GOMPHONEMA ANGUSTATUM	1	3	2	1
1GOOLI	GOMPHONEMA OLIVACEUM		P	P	P
1GOPAR	GOMPHONEMA PARVULUM	1	P		
1HANAM	HANTZSCHIA AMPHIOXYS		P		
1MERCI	MERIDION CIRCULARE	P	P		P
1NAARV	NAVICULA ARVENSIS	P		P	1
1NACRY	NAVICULA CRYPTOCEPHALA	P			
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	1	1	4	3
1NAHEU	NAVICULA HEUFLERI	P	P	1	3
1NAPEL	NAVICULA PELLICULOSA	2		P	3
1NAPYG	NAVICULA PYGMAEA	1			
1NASEA	NAVICULA SECRETA VAR. APICULATA	1	1	1	11
1NATRI	NAVICULA TRIPUNCTATA	P	P		
1NAVIR	NAVICULA VIRIDULA	1	5	1	2
1NIAPI	NITZSCHIA APICULATA	P			P
1NIDEN	NITZSCHIA DENTICULA		P		
1NIDIS	NITZSCHIA DISSIPATA	P			
1NIFON	NITZSCHIA FONTICOLA	2	1		
1NIFRU	NITZSCHIA FRUSTULUM	P	1	P	6
1NIHOL	NITZSCHIA HOLSATICA		P	3	1
1NILAT	NITZSCHIA LATENS				P
1NILIN	NITZSCHIA LINEARIS	P			P
1NIPAL	NITZSCHIA PALEA		P	1	P
1NITRL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS				1
1NISPP	NITZSCHIA SPP.				5
1PIBOR	PINNULARIA BOREALIS	P			
1PIBRE	PINNULARIA BREBISSONII	P	P		
1PISPP	PINNULARIA SPP.				P
1RHGIV	RHOPALODIA GIBBA	P			
1SUOVA	SURIRELLA OVATA	P	P	2	1
1SYFAM	SYNEDRA FAMELICA	P	13	8	1
1SYFAS	SYNEDRA FASCICULATA		P		
1SYULN	SYNEDRA ULNA	P			
1UNPEN	UNIDENTIFIED PENNATE DIATOMS			2	
3PHSPP	PHORMIDIUM SPP.	165	467	127	104

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 14
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 042579
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0324	.0254	.0254	.0254
NUMBER OF TRANSECTS	8	6	5	15
NUMBER OF DROPS	10	10	10	10

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA	7	7	5	6
1ACMIN	ACHNANTHES SPP.	115	256	291	66
1AMOVP	AMPHORA OVALIS	P	P		
1COCPE	COCCONEIS PEDICULUS		P		
1COCPL	COCCONEIS PLACENTULA		P		P
1CYCME	CYCLOTELLA MENEGHENIANA		1	P	1
1CYMAF	CYMBELLA AFFINIS	1	P	1	1
1CYMCY	CYMBELLA CYMBIFORMIS	P	P	1	P
1CYMMI	CYMBELLA MINUTA		P		
1DITEE	DIATOMA TENUE VAR. ELONGATUM		P	P	P
1FRACR	FRAGELARIA CAPUCINA	P	P	P	P
1FRAVA	FRAGILARIA VAUCHERIAE	6	4	1	1
1GOANG	GOMPHONEMA ANGUSTATUM	15	15	8	P
1GOINT	GOMPHONEMA INTRICATUM	P	P		
1GOPAR	GOMPHONEMA PARVULUM		P	P	1
1GYSPE	GYROSIGMA SPENCERII		P		P
1HANAM	HANTZSCHIA AMPHIOXYS	1			
1MERCI	MERIDION CIRCULARE			1	P
1NAARV	NAVICULA ARVENSIS	67	40	150	141
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	2	1	P	P
1NACUS	NAVICULA CUSPIDATA	P		P	P
1NAHEU	NAVICULA HEUFLERI	1	P		1
1NAPEL	NAVICULA PELLICULOSA	32	4	8	15
1NASCA	NAVICULA SECRETA VAR. APICULATA	18	5	6	4
1NAVIR	NAVICULA VIRIDULA	P	P	1	P
1NIACI	NITZSCHIA ACICULARIS	P	P		1
1NIAMP	NITZSCHIA AMPHIBIA	1			
1NIAPI	NITZSCHIA APICULATA				P
1NIDEN	NITZSCHIA DENTICULA	4	1	P	1
1NIDIS	NITZSCHIA DISSIPATA	1			
1NIFON	NITZSCHIA FONTICOLA	4	4		
1NIFRU	NITZSCHIA FRUSTULUM	11		1	2
1NIHOL	NITZSCHIA HOLSATICA	9		2	1
1NILAT	NITZSCHIA LATENS	1	P		
1NILIN	NITZSCHIA LINEARIS	P	P	P	1
1NISPP	NITZSCHIA SPP.	2		4	1
1PIBIC	PINNULARIA BICEPS	P			
1PIBRE	PINNULARIA BREBISSONII		P		P
1RHGIV	RHOPALODIA GIBBA	P	P	P	P
1SUOVA	SURIRELLA OVATA	1	1	P	P
1SUOVL	SURIRELLA OVALIS		P	P	P
1SYFAM	SYNEDRA FAMELICA	22		5	2
1SYFAS	SYNEDRA FASCICULATA	5	3	5	4
1SYULN	SYNEDRA ULNA	P	P	1	P
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	5		4	1
2CLOSP	CLOSTERIUM SPP.		P		
2MOUSP	MOUGEOTIA SPP.	P			
2SCAC3	SCENEDESMUS ACUTUS VAR. GLOBOSIS		P		
2STISP	STIGEOCLONIUM SPP.		P	P	P
2ULSPP	ULOTHRIX SPP.	P	P	P	P
3ENTRI	ENTOPHYSALIS RIVULARIS		P		20
3MICIN	MICROCYSTIS INCERTA				P
3PHSPP	PHORMIDIUM SPP.		P	P	P
4PHSPP	PHACUS SPP.		P		

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 2
NUMBER OF REPLICATES - 8
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 042579
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	.5000	.2200	1.4800	1.2100	1.4800	3.6700	1.4200	.0254
NUMBER OF TRANSECTS	1	1	1	1	1	1	1	*100
NUMBER OF DROPS	9	8	15	8	12	12	15	7

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACLAN	ACHNANTHES LANCEOLATA	P	P	2	1	P	4	P	
1ACMIN	ACHNANTHES SPP.	3	P	1	13	8	6	10	4
1CAAMP	CALONEIS AMPHISBAENA	P					P		
1COCPL	COCCONEIS PLACENTULA								1
1CYMMI	CYMBELLA MINUTA					P			
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	2	P	P	P		3	1	2
1ENORN	ENTOMONEIS PALLUDOSA	2		5	1	P	1	2	2
1FRAVA	FRAGILARIA VAUCHERIAE	91	5	32	47	102	78	43	53
1GOANG	GOMPHONEMA ANGUSTATUM			1	P	P	1	1	2
1GOGRA	GOMPHONEMA GRACILE		P						
1GOINT	GOMPHONEMA INTRICATUM	P							
1GOOLI	GOMPHONEMA OLIVACEUM	10	P		5	10	12	6	30
1GOPAR	GOMPHONEMA PARVULUM		P			P	3	P	
1GYSPE	GYROSIGMA SPENCERII			P					
1HANAM	HANTZSCHIA AMPHIOXYS				P				
1NAARV	NAVICULA ARVENSIS				1	15		6	1
1NACRY	NAVICULA CRYPTOCEPHALA	1			1	P	5		3
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA		P			P			
1NACUS	NAVICULA CUSPIDATA		P						
1NAHEU	NAVICULA HEUFLERI	P			P				
1NAPUP	NAVICULA PUPULA								P
1NAPEL	NAVICULA PELLICULOSA	114	121	27	121	67	29	49	37
1NAPYG	NAVICULA PYGMAEA					2			
1NARHY	NAVICULA RHYNCHOCEPHALA	P							
1NASEA	NAVICULA SECRETA VAR. APICULATA	2		9	P	P	5	P	1
1NATRI	NAVICULA TRIPUNCTATA			P					
1NAVIR	NAVICULA VIRIDULA		P	P	P	P			
1NIAPI	NITZSCHIA APICULATA	1	1	8	P	3	3	P	1
1NIDIS	NITZSCHIA DISSIPATA	6				1			
1NIFON	NITZSCHIA FONTICOLA	41	37	3	45	14	19	8	10
1NIFRU	NITZSCHIA FRUSTULUM	2	1	4	3	P	1	3	1
1NIHOL	NITZSCHIA HOLSATICA	106	56	38	100	33	48	119	2
1NILAT	NITZSCHIA LATENS			P		P			
1NILIN	NITZSCHIA LINEARIS	P		1					
1NITRL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS	P				P			
1NISPP	NITZSCHIA SPP.	5	2	17	7	3	4	5	6
1PIBRE	PINNULARIA BREBISSONII			P	1	P	P		
1PISPP	PINNULARIA SPP.							P	
1SULIN	SURIRELLA LINEARIS	P							
1SUOVA	SURIRELLA OVATA	78	9	108	44	63	100	33	100
1SUOVL	SURIRELLA OVALIS	1	2	11	4	P	2	P	1
1SUSPP	SURIRELLA SPP.	P							
1SYAMP	SYNEDRA AMPHICEPHALA	2							7
1SYFAM	SYNEDRA FAMELICA	7	P	2	13	4	26	1	4
1SYFAS	SYNEDRA FASCICULATA				P				
1SYINC	SYNEDRA INCISA								1
1SYULN	SYNEDRA ULNA		P						
1UNPEN	UNIDENTIFIED PENNATE DIATOMS		2	5			2		4
2STISP	STIGEOCLONIUM SPP.	P		P	P		6	P	2
4EUSPP	EUGLENA SPP.				P				

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 21
NUMBER OF REPLICATES - 8
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.3 SAMPLE COLLECTION DATE - 042579
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	.8800	1.1300	2.5000	2.3000	3.6000	4.5000	4.5000	4.5000
NUMBER OF TRANSECTS	1	1	1	1	1	1	2	1
NUMBER OF DROPS	15	15	10	10	10	15	15	10

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACLAN	ACHNANTHES LANCEOLATA	P	3	4	13	12	1	P	
1ACLIN	ACHNANTHES LINEARIS								4
1ACMIN	ACHNANTHES SPP.	11	5	2	9	7	9	1	46
1AMOVP	AMPHORA OVALIS						P		
1COCPE	COCCONEIS PEDICULUS	P	1						
1COCPL	COCCONEIS PLACENTULA	P				1			
1CYCME	CYCLOTELLA MENEGHENIANA	P	P		1	2			
1CYMCY	CYMBELLA CYMBIFORMIS		P						
1CYMMI	CYMBELLA MINUTA			1		1	P	1	
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	P	P						1
1DITEE	DIATOMA TENUE VAR. ELONGATUM								2
1ENORN	ENTOMONEIS PALLUDOSA	P	2	4		3	P	3	1
1FRACO	FRAGILARIA CONSTRUENS						P		
1FRACR	FRAGELARIA CAPUCINA							P	
1FRAVA	FRAGILARIA VAUCHERIAE	43	53	54	26	105	78	90	111
1GOANG	GOMPHONEMA ANGUSTATUM	3			3	1		P	P
1GOOLI	GOMPHONEMA OLIVACEUM	15	P	2	7	4	2		3
1GOPAR	GOMPHONEMA PARVULUM			2	1				
1GOTER	GOMPHONEMA TERGESTINUM				6				
1GYSPE	GYROSIGMA SPENCERII							P	
1NAARV	NAVICULA ARVENSIS	5	3	P		1	1	1	
1NACRY	NAVICULA CRYPTOCEPHALA	3	11	7	7	4	1	2	1
1NAHEU	NAVICULA HEUFLERI	1		1	6				
1NAMUT	NAVICULA MUTICA					1			
1NAPEL	NAVICULA PELLICULOSA	18	29	29	107	64	26	38	28
1NASEA	NAVICULA SECRETA VAR. APICULATA	1	9	2		3	2	6	
1NATRI	NAVICULA TRIPUNCTATA								1
1NAVIR	NAVICULA VIRIDULA							1	2
1NASPP	NAVICULA SPP.			1				3	1
1NIAPI	NITZSCHIA APICULATA	1	1	1	1	1	P	4	1
1NIDIS	NITZSCHIA DISSIPATA	1	1		3	1	1		2
1NIFON	NITZSCHIA FONTICOLA	4	2	10	51	28	2	2	6
1NIFRU	NITZSCHIA FRUSTULUM	6		2	6	26	20	10	20
1NIHOL	NITZSCHIA HOLSATICA	68	12	6	12	40	13	19	12
1NILAT	NITZSCHIA LATENS	P							
1NILIN	NITZSCHIA LINEARIS			P					
1NIMIC	NITZSCHIA MICROCEPHALA						P		1
1NIPAL	NITZSCHIA PALEA			P	1			P	3
1NISPP	NITZSCHIA SPP.	5	4	5	12		6	P	P
1PIBOR	PINNULARIA BOREALIS	P							
1PIBRE	PINNULARIA BREBISSONII		P						
1PISPP	PINNULARIA SPP.			1					
1RHCUR	RHOICOSPHENIA CURVATA								P
1SUOVA	SURIRELLA OVATA		115	105	38	100	101	22	124
1SUOVL	SURIRELLA OVALIS	110			3	2	1		1
1SYAMP	SYNEDRA AMPHICEPHALA							2	
1SYFAM	SYNEDRA FAMELICA	4	1						
1SYINC	SYNEDRA INCISA						2		
1SYULN	SYNEDRA ULNA							1	
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	1		2	3	2	2	2	4
2STISP	STIGEOCLONIUM SPP.	2	4	3	P	1	P		4
3PHSPP	PHORMIDIUM SPP.					P			
4EUSPP	EUGLENA SPP.			1			P		

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 27
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 042579
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	1.3000	3.1000	1.5000	4.5000
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF DROPS	11	8	15	8

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA		3	3	5
1ACLIN	ACHNANTHES LINEARIS				1
1ACMIC	ACHNANTHES MICROCEPHALA		3		
1ACMIN	ACHNANTHES SPP.		15	57	1
1AMOVP	AMPHORA OVALIS	1	4		3
1AMPER	AMPHORA PERPUSILLA		8	6	1
1COCPE	COCCONEIS PEDICULUS	P	P	P	4
1COCPL	COCCONEIS PLACENTULA		3	1	5
1CYMAF	CYMBELLA AFFINIS	4	P	1	
1CYMMI	CYMBELLA MINUTA	17	5	1	4
1CYMSI	CYMBELLA SINUATA		1	2	2
1DIVUL	DIATOMA VULGARE				2
1EPSOR	EPITHEMIA SOREX	20	151		47
1EPTUR	EPITHEMIA TURGIDA	P			
1FRACO	FRAGILARIA CONSTRUENS		P		
1FRAVA	FRAGILARIA VAUCHERIAE	P	5		1
1GOANG	GOMPHONEMA ANGUSTATUM	1	9	P	
1GOCLE	GOMPHONEMA CLEVEI		P		1
1GOOLI	GOMPHONEMA OLIVACEUM	181	53	120	116
1GOPAR	GOMPHONEMA PARVULUM		9		
1GYSPE	GYROSIGMA SPENCERII			P	
1NACAP	NAVICULA CAPITATA		P		
1NACRY	NAVICULA CRYPTOCEPHALA	1		1	1
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	18	19	10	38
1NAPEL	NAVICULA PELLICULOSA		8	53	3
1NASAI	NAVICULA SALINARUM VAR. INTERMEDIA	P			
1NASEA	NAVICULA SECRETA VAR. APICULATA				P
1NATRI	NAVICULA TRIPUNCTATA	4	8		2
1NAVIR	NAVICULA VIRIDULA	5	13	8	82
1NASPP	NAVICULA SPP.				1
1NIDIS	NITZSCHIA DISSIPATA	7	33	2	16
1NIFON	NITZSCHIA FONTICOLA	1	22	3	7
1NIFRU	NITZSCHIA FRUSTULUM	10	2	3	10
1NIHOL	NITZSCHIA HOLSATICA	5	10		17
1NIIGN	NITZSCHIA IGNORATA		2	2	1
1NISPP	NITZSCHIA SPP.		3		
1PISPP	PINNULARIA SPP.		P		
1RHGIV	RHOPALODIA GIBBA	P			
1RHCUR	RHOICOSPHENIA CURVATA	11	5	1	19
1SUOVA	SURIRELLA OVATA				4
1SYULN	SYNEDRA ULNA			P	
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	2		2	5
2CLASP	CLADOPHORA SPP.				P
2STISP	STIGEOCLONIUM SPP.		P		
3OSPSE	OSCILLATORIA PSEUDOGEMINATA				P
3PHSPP	PHORMIDIUM SPP.	62	61	2	163

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 29
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 042579
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - HIATT PROJECT NO. = 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	4.5000	4.5000	4.5000	4.5000
NUMBER OF TRANSECTS	1	3	1	1
NUMBER OF DROPS	8	15	15	15

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA	5	2	5	
1ACMIN	ACHNANTHES SPP.	109	3	186	172
1AMOVP	AMPHORA OVALIS			1	
1AMPER	AMPHORA PERPUSILLA	1		14	
1COCPE	COCCONEIS PEDICULUS	P	1		
1COCPL	COCCONEIS PLACENTULA	3	14	1	P
1CYCBO	CYCLOTELLA BODANICA				P
1CYMAF	CYMBELLA AFFINIS	1	2		1
1CYMME	CYMBELLA MEXICANA	P			
1CYMMI	CYMBELLA MINUTA	2	2	1	P
1CYMSI	CYMBELLA SINUATA	3	1	4	P
1DIVUL	DIATOMA VULGARE	P			
1EPSOR	EPITHEMIA SOREX	P	6	2	
1FRACR	FRAGELARIA CAPUCINA			P	
1FRALE	FRAGILARIA LEPTOSTAURON			P	
1FRAVA	FRAGILARIA VAUCHERIAE	7	8	11	
1GOANG	GOMPHONEMA ANGUSTATUM	P			
1GOCLE	GOMPHONEMA CLEVEI	P	6	P	
1GOOLI	GOMPHONEMA OLIVACEUM	15	40	18	20
1GOPAR	GOMPHONEMA PARVULUM	1	2		
1HAARC	HANNAFA ARCUS	P			
1NACRY	NAVICULA CRYPTOCEPHALA		1	2	
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA		1	6	4
1NACUS	NAVICULA CUSPIDATA		1		
1NAPEL	NAVICULA PELLICULOSA	32		86	6
1NASEA	NAVICULA SECRETA VAR. APICULATA				P
1NATRI	NAVICULA TRIPUNCTATA	2	2		P
1NAVIR	NAVICULA VIRIDULA	9	133	7	4
1NASPP	NAVICULA SPP.		3		
1NIDIS	NITZSCHIA DISSIPATA		1	6	1
1NIFON	NITZSCHIA FONTICOLA	2	2	6	3
1NIFRU	NITZSCHIA FRUSTULUM	1	1	6	
1NIHOL	NITZSCHIA HOLSATICA	2	2		P
1NILIN	NITZSCHIA LINEARIS				P
1NIPAL	NITZSCHIA PALEA		1		
1NISPP	NITZSCHIA SPP.	P			P
1RHCUR	RHOICOSPHENIA CURVATA	P	4		1
1SUOVA	SURIRELLA OVATA	2	7	1	1
1SUOVL	SURIRELLA OVALIS	P			
1SYULN	SYNEDRA ULNA	P	1		
1UNCEN	UNIDENTIFIED CENTRIC DIATOMS		1		
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	1	2	4	
2STISP	STIGEOCLONIUM SPP.			P	
3OSSPP	OSCILLATORIA SPP.		P		
3PHSPP	PHORMIDIUM SPP.	2			1
4PHSPP	PHACUS SPP.				P

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

MAY

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 13
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 052379
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	6.2500	8.8000	12.8000	2.5500
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF DROPS	10	9	15	10

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA	2	2	4	
1ACMIN	ACHNANTHES SPP.	38	17	21	72
1AMOVP	AMPHORA OVALIS			1	
1CYMAM	CYMBELLA AMPHICEPHALA	1		2	
1CYMCY	CYMBELLA CYMBIFORMIS			P	
1EPSOR	EPITHEMIA SOREX	1			
1FRAVA	FRAGILARIA VAUCHERIAE	5		P	
1GOANG	GOMPHONEMA ANGUSTATUM			P	
1HANAM	HANTZSCHIA AMPHIOXYS	2			
1NAARV	NAVICULA ARVENSIS			1	
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	3		3	4
1NAHEU	NAVICULA HEUFLERI	1	1	2	1
1NAPEL	NAVICULA PELLICULOSA	5		5	1
1NASEA	NAVICULA SECRETA VAR. APICULATA			2	
1NAVIR	NAVICULA VIRIDULA	7	2	8	25
1NIAPI	NITZSCHIA APICULATA			1	
1NIDEN	NITZSCHIA DENTICULA	P	P		
1NIDIS	NITZSCHIA DISSIPATA	1			
1NIFON	NITZSCHIA FONTICOLA		1	2	3
1NIFRU	NITZSCHIA FRUSTULUM	1		2	
1NIHOL	NITZSCHIA HOLSATICA	3			
1NILIN	NITZSCHIA LINEARIS	1		P	
1NIPAL	NITZSCHIA PALEA	1			
1NISPP	NITZSCHIA SPP.		1	2	
1PIBRE	PINNULARIA BREBISSONII			P	
1SUOVL	SURIRELLA OVALIS	P			P
1SYFAM	SYNEDRA FAMELICA	4	P		
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	2		1	2
3PHSPP	PHORMIDIUM SPP.	189	8	52	260

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 14
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 052479
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.4500	.5600	.4700	.7920
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF DROPS	10	10	10	20

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA	7	11	4	4
1ACMIN	ACHNANTHES SPP.	107	137	114	124
1AMOVP	AMPHORA OVALIS	P			
1BILAC	BICOECA LACUSTRIS			1	
1CYCME	CYCLOTELLA MENEGHENIANA	1		1	
1CYMAF	CYMBELLA AFFINIS		P	P	1
1CYMCY	CYMBELLA CYMBIFORMIS		P		
1CYMMI	CYMBELLA MINUTA	P	P		
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA				P
1FRACR	FRAGELARIA CAPUCINA	P	P		
1FRAVA	FRAGILARIA VAUCHERIAE	1	3		
1GOANG	GOMPHONEMA ANGUSTATUM	P	P		1
1GYSPE	GYROSIGMA SPENCERII			P	
1NAARV	NAVICULA ARVENSIS	4	3	10	40
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	2			1
1NACUS	NAVICULA CUSPIDATA				P
1NAHEU	NAVICULA HEUFLERI	P			
1NAPEL	NAVICULA PELLICULOSA	P	1	2	
1NASEA	NAVICULA SECRETA VAR. APICULATA	5	11	7	2
1NAVIR	NAVICULA VIRIDULA	1			
1NIACI	NITZSCHIA ACICULARIS		P		
1NIAPI	NITZSCHIA APICULATA			P	
1NIDEN	NITZSCHIA DENTICULA	2	4	P	3
1NIFON	NITZSCHIA FONTICOLA		3	1	4
1NIFRU	NITZSCHIA FRUSTULUM		2		2
1NIHOL	NITZSCHIA HOLSATICA	P	P	1	2
1NILIN	NITZSCHIA LINEARIS	P	1	P	P
1NIMIC	NITZSCHIA MICROCEPHALA				1
1SUOVA	SURIRELLA OVATA	1	P		P
1SYFAM	SYNEDRA FAMELICA		1		3
1SYFAS	SYNEDRA FASCICULATA	2	P	5	5
1SYULN	SYNEDRA ULNA	1			
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	1	3	3	
2CLASP	CLADOPHORA SPP.		P		
2STISP	STIGEOCLONIUM SPP.		P	P	
3PHSPP	PHORMIDIUM SPP.	19	5		1

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 20
NUMBER OF REPLICATES - 8
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 052379
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	1.5100	2.5700	6.3000	1.6400	1.8000	2.5400	.8820	.7200
NUMBER OF TRANSECTS	1	1	1	1	1	1	1	1
NUMBER OF DROPS	15	15	15	15	8	20	10	15

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACLAN	ACHNANTHES LANCEOLATA	1		1		P			
1ACMIN	ACHNANTHES SPP.	71	33	9	20	6	10	P	6
1CAAMP	CALONEIS AMPHISBAENA	P	P		P	P			P
1CYCME	CYCLOTELLA MENEGHENIANA		1						
1CYMAF	CYMBELLA AFFINIS				P	P		1	
1CYMMI	CYMBELLA MINUTA					P			
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA		2	P			P		
1ENORN	ENTOMONEIS PALLUDOSA	1	1	1	1				
1FRAVA	FRAGILARIA VAUCHERIAE	2	13	11	2	P	8		9
1GOANG	GOMPHONEMA ANGUSTATUM	1	1				3		
1GOOLI	GOMPHONEMA OLIVACEUM				1				
1NAARV	NAVICULA ARVENSIS	3						1	
1NACRY	NAVICULA CRYPTOCEPHALA			P		P			
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA		P		1	1	2	P	1
1NACUS	NAVICULA CUSPIDATA			1		P			
1NAHEU	NAVICULA HEUFLERI					1	1		
1NAPEL	NAVICULA PELLICULOSA	102	40	103	104	100	78	100	86
1NASEA	NAVICULA SECRETA VAR. APICULATA	1		5	1	1	2		3
1NATRI	NAVICULA TRIPUNCTATA	P				P	P		
1NAVIR	NAVICULA VIRIDULA				1				
1NIAPI	NITZSCHIA APICULATA			2					1
1NIDIS	NITZSCHIA DISSIPATA					1	1		
1NIFON	NITZSCHIA FONTICOLA	83	115	61	82	38	106	17	103
1NIFRU	NITZSCHIA FRUSTULUM	6	14	P	2	11	68	8	9
1NIHOL	NITZSCHIA HOLSATICA	3	1	3	3	7	10	5	8
1NILAT	NITZSCHIA LATENS	1		1		1	1	P	2
1NILIN	NITZSCHIA LINEARIS	P				P	P		
1NIMIC	NITZSCHIA MICROCEPHALA	2	1						
1NIPAL	NITZSCHIA PALEA			1					
1NISPP	NITZSCHIA SPP.			4	2				3
1PIBRE	PINNULARIA BREBISSONII		1		P				
1PLDEL	PLEUROSIGMA DELICATISSIMA		P			P	P		P
1SUOVA	SURIRELLA OVATA	5	8	21	P	3	7	1	1
1SUOVL	SURIRELLA OVALIS	P	P	1			P		P
1SYFAM	SYNEDRA FAMELICA	2	2				1		
1SYFAS	SYNEDRA FASCICULATA					1			
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	1		3	2	P			
3PHSPP	PHORMIDIUM SPP.	1	1				3		

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 21
NUMBER OF REPLICATES - 8
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.? SAMPLE COLLECTION DATE - 052379
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	5.7800	1.8500	1.4400	5.4400	.9700	2.1400	2.3000	3.2900
NUMBER OF TRANSECTS	1	1	1	1	1	1	1	1
NUMBER OF DROPS	15	10	10	15	12	15	10	15

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACMIN	ACHNANTHES SPP.	13	8	2		12	8	2	8
1AMOVP	AMPHORA OVALIS	1							
1CAAMP	CALONEIS AMPHISBAENA			P	P	P	P		
1CYCME	CYCLOTELLA MENEGHENIANA	P	P			1		1	2
1CYMNS	CYMBELLA MINUTA VAR. SILESIACA					P	P		1
1ENORN	ENTOMONEIS PALLUDOSA	3	P			1	P		
1FRAVA	FRAGILARIA VAUCHERIAE	29	10	1	4	4	1	4	3
1GOANG	GOMPHONEMA ANGUSTATUM	3							
1GOOLI	GOMPHONEMA OLIVACEUM					1		1	
1GOSPP	GOMPHONEMA SPP.			P					
1GYSPE	GYROSIGMA SPENCERII					P			
1NAARV	NAVICULA ARVENSIS	6							1
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA			1		2			1
1NAHEU	NAVICULA HEUFLERI	1							
1NAPEL	NAVICULA PELLICULOSA	65	101	108	42	101	103	94	115
1NASEA	NAVICULA SECRETA VAR. APICULATA	3	2		2	P	3	1	3
1NATRI	NAVICULA TRIPUNCTATA	1					P		P
1NIAPI	NITZSCHIA APICULATA					P			
1NIDIS	NITZSCHIA DISSIPATA			P					
1NIFON	NITZSCHIA FONTICOLA	100	33	39	56	25	31	101	100
1NIFRU	NITZSCHIA FRUSTULUM	5	7	5	8	13	5	7	
1NIHOL	NITZSCHIA HOLSATICA	7	3	3	3	5	6	6	1
1NILAT	NITZSCHIA LATENS					3		1	
1NIMIC	NITZSCHIA MICROCEPHALA					5		1	4
1NITRL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS					P			1
1NISPP	NITZSCHIA SPP.	1		1	1				2
1PIBRE	PINNULARIA BREBISSONII			P					
1RHCUR	RHOICOSPHENIA CURVATA								1
1SUOVA	SURIRELLA OVATA	3	2	P	P	3	4	P	10
1SUOVL	SURIRELLA OVALIS		P	P	P	P	P		P
1SYFAM	SYNEDRA FAMELICA	3					1	1	
1UNPEN	UNIDENTIFIED PENNATE DIATOMS		2	1			1		2
2CHLSP	CHLAMYDOMONAS SPP.					P	P	P	
2STISP	STIGEOCLONIUM SPP.		P	P		P	P		
3PHSPP	PHORMIDIUM SPP.	2	3		5	2			1
4PHSPP	PHACUS SPP.			5					1

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT.

JUNE

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 11
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 062179
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	16.1600	.7380	4.8780	1.4400
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF DROPS	12	10	10	6

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA				1
1ACMIN	ACHNANTHES SPP.	78	101	53	22
1CYMMI	CYMBELLA MINUTA		P		
1FRAVA	FRAGILARIA VAUCHERIAE		3	8	31
1GOANG	GOMPHONEMA ANGUSTATUM		1		
1NAARV	NAVICULA ARVENSIS	1	1	1	2
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	1	P		13
1NAHEU	NAVICULA HEUFLERI	1			11
1NAPEL	NAVICULA PELLICULOSA	1	7	16	8
1NASEA	NAVICULA SECRETA VAR. APICULATA			1	8
1NAVIR	NAVICULA VIRIDULA		P	1	2
1NASPP	NAVICULA SPP.	4			1
1NIACI	NITZSCHIA ACICULARIS				P
1NIAPI	NITZSCHIA APICULATA				P
1NIDIS	NITZSCHIA DISSIPATA				P
1NIEPI	NITZSCHIA EPITHEMOIDES		P		
1NIFON	NITZSCHIA FONTICOLA	2	4	3	100
1NIFRU	NITZSCHIA FRUSTULUM	6	8	P	1
1NIHOL	NITZSCHIA HOLSATICA				9
1NILIN	NITZSCHIA LINEARIS		P		1
1NISPP	NITZSCHIA SPP.		2		4
1PIBRE	PINNULARIA BREBISSONII				P
1RHGIV	RHOPALODIA GIBBA				P
1SUOVA	SURIRELLA OVATA				9
1SUOVL	SURIRELLA OVALIS				P
1SYFAM	SYNEDRA FAMELICA			1	2
1SYFAS	SYNEDRA FASCICULATA			P	
1SYSPP	SYNEDRA SPP.		P		
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	1	1	2	
3LYSPP	LYNGBYA SPP.	2	5	5	
3OSPSE	OSCILLATORIA PSEUDOGEMINATA	1			
3OSSPP	OSCILLATORIA SPP.	1			
3PHSPP	PHORMIDIUM SPP.	218	172	313	38

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 14
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 062179
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.5720	.4070	1.1700	.5090
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF DROPS	6	6	6	6

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA	9	9	10	8
1ACMIN	ACHNANTHES SPP.	88	82	100	103
1AMOVP	AMPHORA OVALIS		1	1	1
1CAAMP	CALONEIS AMPHISBAENA	P	P	P	P
1COCPL	COCCONEIS PLACENTULA	P			
1CYCME	CYCLOTELLA MENEGHENIANA	6	5	5	2
1CYMAF	CYMBELLA AFFINIS	2	1	4	P
1CYMCI	CYMBELLA CISTULA			P	3
1CYMCY	CYMBELLA CYMBIFORMIS	1	P		
1CYMMI	CYMBELLA MINUTA	1	4	1	1
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA			2	
1DITEN	DIATOMA VULGARE VAR. GRANDE	61	33	7	1
1FRACR	FRAGELARIA CAPUCINA	5	2		
1FRASP	FRAGILARIA SPP.	15			
1FRAVA	FRAGILARIA VAUCHERIAE	5	8	8	16
1GOANG	GOMPHONEMA ANGUSTATUM	2		1	
1GOPAR	GOMPHONEMA PARVULUM	1		2	
1GOSUM	GOMPHONEMA SUBCLAVATUM VAR. MEXICANUM	2			
1GOSPP	GOMPHONEMA SPP.	3	2	2	2
1GYSPE	GYROSIGMA SPENCERII		P	P	
1HANAM	HANTZSCHIA AMPHIOXYS			P	
1MERCI	MERIDION CIRCULARE	1	1		
1NAARV	NAVICULA ARVENSIS			1	1
1NACRY	NAVICULA CRYPTOCEPHALA		1		
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	9	4	8	1
1NACUS	NAVICULA CUSPIDATA	1	P	P	P
1NAHEU	NAVICULA HEUFLERI	2		12	2
1NAPYG	NAVICULA PYGMAEA				1
1NASEA	NAVICULA SECRETA VAR. APICULATA	19	30	38	8
1NASPP	NAVICULA SPP.			1	2
1NIACI	NITZSCHIA ACICULARIS		4	1	1
1NIACU	NITZSCHIA ACUTA			1	
1NIDEN	NITZSCHIA DENTICULA	28	22	12	16
1NIFON	NITZSCHIA FONTICOLA	4	3	26	3
1NIFRU	NITZSCHIA FRUSTULUM	1		7	2
1NIHOL	NITZSCHIA HOLSATICA	2	3	5	1
1NIHUN	NITZSCHIA HUNGARICA		P		
1NILIN	NITZSCHIA LINEARIS	4	4	5	
1NIPAL	NITZSCHIA PALEA		1		
1NISPP	NITZSCHIA SPP.	1	2	1	
1PIBRE	PINNULARIA BREBISSONII	P	P	P	1
1PIMAI	PINNULARIA MAIOR	P		P	P
1PISPP	PINNULARIA SPP.		P		
1PLDEL	PLEUROSIGMA DELICATISSIMA	P			
1RHGIV	RHOPALODIA GIBBA	P	1	P	
1SUOVA	SURIRELLA OVATA	1	P	P	1
1SUOVL	SURIRELLA OVALIS	P	P	P	P
1SYFAM	SYNEDRA FAMELICA	95	107	58	49
1SYFAS	SYNEDRA FASCICULATA	104	68	17	17
1SYULN	SYNEDRA ULNA	1	3	1	
1THSPP	THALASSIOSIRA FLUVIATILIS	1		2	2
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	4	5	10	1
2COSSP	COSMARIUM SPP.				P
2MOUSP	MOUGEOTIA SPP.		1		
2OESPP	OEDOGONIUM SPP.	P	P		P
2ULSPP	ULOTHRIX SPP.	P	1	2	1

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 20
NUMBER OF REPLICATES - 8
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 062079
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	1.4220	2.8100	1.7100	1.3500	.4500	.7920	3.2040	9.4140
NUMBER OF TRANSECTS	1	1	1	1	1	1	1	1
NUMBER OF DROPS	10	10	10	10	10	10	10	10

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACLAN	ACHNANTHES LANCEOLATA		2						
1ACMIN	ACHNANTHES SPP.	15	19	16	19	102	11	4	8
1CAAMP	CALONEIS AMPHISBAENA	P	P		P			P	
1CYCME	CYCLOTELLA MENEGHENIANA	1	20	3	3	3	4	41	10
1CYMCI	CYMBELLA CISTULA	P							
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA		3	1					
1ENORN	ENTOMONEIS PALLUDOSA					P			
1EPSOR	EPITHEMIA SOREX				P				
1FRAVA	FRAGILARIA VAUCHERIAE	6	29	4	7	1	P	2	2
1GOOLI	GOMPHONEMA OLIVACEUM		1						
1GOSPP	GOMPHONEMA SPP.	1				1			
1GYSPE	GYROSIGMA SPENCERII	P		P	P		P		
1NAARV	NAVICULA ARVENSIS	1	3			2			
1NACRY	NAVICULA CRYPTOCEPHALA			3	6	1	1		2
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA		2	P	1	1		2	
1NAHAL	NAVICULA HALOPHILA	1		P					
1NAHEU	NAVICULA HEUFLERI			3	1				
1NAPEL	NAVICULA PELLICULOSA	10	1	36	34	2	10	2	20
1NASEA	NAVICULA SECRETA VAR. APICULATA		2					1	1
1NATRI	NAVICULA TRIPUNCTATA	P	P	1		P			P
1NAVIR	NAVICULA VIRIDULA			P	1		P	1	1
1NASPP	NAVICULA SPP.	1				P			
1NIAPI	NITZSCHIA APICULATA	P							
1NIDIS	NITZSCHIA DISSIPATA		1					1	1
1NIFON	NITZSCHIA FONTICOLA	100	101	102	100	81	104	100	100
1NIFRU	NITZSCHIA FRUSTULUM	1	3	3	1	2	1	1	1
1NIHOL	NITZSCHIA HOLSATICA	6	3		2	2	2	1	1
1NILAT	NITZSCHIA LATENS	1	3	8	7	3	1		4
1NILIN	NITZSCHIA LINEARIS		1						
1NIMIC	NITZSCHIA MICROCEPHALA	4	4	3	1	1			5
1NIPAL	NITZSCHIA PALEA		1			1			
1NITRL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS				P				
1NISPP	NITZSCHIA SPP.	2	2	3	6	1			2
1SUOVA	SURIRELLA OVATA	P	4	1		1	P	P	1
1SUOVL	SURIRELLA OVALIS		P	P			P	P	P
1SYPUL	SYNEDRA PULCHELLA							2	
1SYSPP	SYNEDRA SPP.	P							1
1UNPEN	UNIDENTIFIED PENNATE DIATOMS		2	1	1			1	
2CHAPR	BULBOCHAETAE SPP.	P	P	P	P		P	P	P
2GLOSP	GLOEOCYSTIS SPP.							P	
2MOUSP	MOUGEOTIA SPP.				P			P	
2STISP	STIGEOCLONIUM SPP.				P		P	P	P
3APHSP	APHANOTHECE SPP.				P				
3PHSPP	PHORMIDIUM SPP.	12	28		P	P	10	23	3

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 21
NUMBER OF REPLICATES - 8
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 062079
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	3.3840	1.4220	1.4760	5.2200	1.3500	2.7000	5.3460	2.8400
NUMBER OF TRANSECTS	1	1	1	1	1	1	1	1
NUMBER OF DROPS	10	10	10	10	10	10	10	10

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACLAN	ACHNANTHES LANCEOLATA							1	
1ACMIN	ACHNANTHES SPP.	6	2	3	9	30	9	2	6
1CAAMP	CALONEIS AMPHISBAENA					P		P	P
1CYCME	CYCLOTELLA MENEGHENIANA	19	9	6	21	9	13	19	8
1CYMMI	CYMBELLA MINUTA		1						
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA				P				
1ENORN	ENTOMONEIS PALLUDOSA				1	P	P	P	
1EPSPP	EPITHEMIA SPP.			P					
1FRAVA	FRAGILARIA VAUCHERIAE	P	6	1	17	2	3		6
1GOOLI	GOMPHONEMA OLIVACEUM					2			
1GOSPP	GOMPHONEMA SPP.				1				
1GYSPE	GYROSIGMA SPENCERII		P			P			
1NACRY	NAVICULA CRYPTOCEPHALA				1		1		
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA		3		2	5	1	2	
1NAPEL	NAVICULA PELLICULOSA	1	3	2	7	24	6	13	4
1NAPYG	NAVICULA PYGMAEA	P							
1NASEA	NAVICULA SECRETA VAR. APICULATA		1		P	1	1	P	
1NAVIR	NAVICULA VIRIDULA			P			3	1	P
1NASPP	NAVICULA SPP.			P				1	
1NIAPI	NITZSCHIA APICULATA				P				
1NIDEN	NITZSCHIA DENTICULA								1
1NIFON	NITZSCHIA FONTICOLA	102	106	101	100	101	102	101	101
1NIFRU	NITZSCHIA FRUSTULUM	1	3		4	7			
1NIHOL	NITZSCHIA HOLSATICA		1						
1NILAT	NITZSCHIA LATENS		3		1		2	2	
1NILIN	NITZSCHIA LINEARIS	1	P						
1NIMIC	NITZSCHIA MICROCEPHALA		4		1	3		2	P
1NIPAL	NITZSCHIA PALEA	1							
1NITRL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS	1							
1NISPP	NITZSCHIA SPP.	1	1		5				1
1NISPO	NITZSCHIA SP. #1					8			
1RHGIB	RHOPALODIA GIBBERULA					P			
1SUOVA	SURIRELLA OVATA	P	3	P	1	P	P		
1SUOVL	SURIRELLA OVALIS		P		1	P	P		1
1SYFAM	SYNEDRA FAMELICA						1		
1SYPUL	SYNEDRA PULCHELLA	P			2				
1SYRAD	SYNEDRA RADIANS				1				
1UNPEN	UNIDENTIFIED PENNATE DIATOMS		1		4	3	1		
2CHAPR	BULBOCHAETAE SPP.	P	P	P	P	P	P	3	14
2GLOSP	GLOEOCYSTIS SPP.		P			P	P		
2MOUSP	MOUGEOTIA SPP.					P	P	P	P
2STISP	STIGEOCLONIUM SPP.	P	P	P		P	P	P	P
3ANASP	ANABAENA SPP.					P		P	
3DACSP	DACTYLOCOCCOPSIS SPP.								177
3OSSPP	OSCILLATORIA SPP.					P			P
3PHSPP	PHORMIDIUM SPP.	1	1	5	1	1	3	2	3

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

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PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 13
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.2 SAMPLE COLLECTION DATE - 071979
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	13.0100	.0254	1.2600	.9900
NUMBER OF TRANSECTS	1	6	1	1
NUMBER OF DROPS	12	6	12	12

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA	1			
1ACMIN	ACHNANTHES SPP.	102	411	101	101
1CYMAF	CYMBELLA AFFINIS		P		
1CYMCY	CYMBELLA CYMBIFORMIS		1		
1EPSOR	EPITHEMIA SOREX		P		
1FRAVA	FRAGILARIA VAUCHERIAE	14	14	7	4
1GOANG	GOMPHONEMA ANGUSTATUM		2	P	P
1GOPAR	GOMPHONEMA PARVULUM			1	1
1NAARV	NAVICULA ARVENSIS	2		4	
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA		P		
1NAPEL	NAVICULA PELLICULOSA	10		7	1
1NASEA	NAVICULA SECRETA VAR. APICULATA	2	P		
1NAVIR	NAVICULA VIRIDULA		P		
1NIAPI	NITZSCHIA APICULATA			P	
1NILIN	NITZSCHIA LINEARIS				P
1NISPP	NITZSCHIA SPP.	1			
1RHGIV	RHOPALODIA GIBBA		P		
1SUOVA	SURIRELLA OVATA		P		
1SUOVL	SURIRELLA OVALIS		P		
1SYFAM	SYNEDRA FAMELICA		P		
1SYFAS	SYNEDRA FASCICULATA		P	P	P
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	1			1
2STISP	STIGEOCLONIUM SPP.	1	P	P	
3PHSPP	PHORMIDIUM SPP.	1		P	

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 14
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 071979
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.8640	1.1150	.9180	2.4120
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF DROPS	6	6	5	3

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA	5	10	8	35
1ACMIN	ACHNANTHES SPP.	100	100	100	104
1AMOVP	AMPHORA OVALIS	P	P	1	1
1CAAMP	CALONEIS AMPHISBAENA	P	P	1	P
1COCPL	COCCONEIS PLACENTULA				P
1CYCME	CYCLOTELLA MENEGHENIANA		1	2	2
1CYMAF	CYMBELLA AFFINIS		P	P	1
1CYMCY	CYMBELLA CYMBIFORMIS	P	P	1	1
1CYMMI	CYMBELLA MINUTA	2	P	4	10
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA		1		
1DITEE	DIATOMA TENUE VAR. ELONGATUM		P		
1DITEN	DIATOMA VULGARE VAR. GRANDE			P	1
1ENORN	ENTOMONEIS PALLUDOSA	P			
1FRACR	FRAGELARIA CAPUCINA	P	P		7
1FRAPI	FRAGILARIA PINNATA			1	2
1FRAVA	FRAGILARIA VAUCHERIAE	2	1	6	5
1GOANG	GOMPHONEMA ANGUSTATUM	1	1	2	2
1GOPAR	GOMPHONEMA PARVULUM	P	1		1
1GOSPP	GOMPHONEMA SPP.		1		
1GYSPE	GYROSIGMA SPENCERII	P	P	P	P
1HANAM	HANTZSCHIA AMPHIOXYS		P		P
1NAARV	NAVICULA ARVENSIS				P
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	2	2	3	13
1NACUS	NAVICULA CUSPIDATA	P		P	P
1NAHEU	NAVICULA HEUFLERI		1		1
1NAPEL	NAVICULA PELLICULOSA		2	2	2
1NASEA	NAVICULA SECRETA VAR. APICULATA	10	29	25	77
1NAVIR	NAVICULA VIRIDULA	P	P	1	2
1NIACI	NITZSCHIA ACICULARIS			P	3
1NIAPI	NITZSCHIA APICULATA	P			
1NIDEN	NITZSCHIA DENTICULA	1	3	6	13
1NIDIS	NITZSCHIA DISSIPATA			1	1
1NIFON	NITZSCHIA FONTICOLA	5	3	3	13
1NIFRU	NITZSCHIA FRUSTULUM		2		
1NIHOL	NITZSCHIA HOLSATICA		2		2
1NILIN	NITZSCHIA LINEARIS	P	P	2	1
1NIMIC	NITZSCHIA MICROCEPHALA			P	P
1NIPAL	NITZSCHIA PALEA	P			1
1NISPP	NITZSCHIA SPP.	P			2
1PIBRE	PINNULARIA BREBISSONII		P		1
1PISPP	PINNULARIA SPP.	P		P	P
1RHGIB	RHOPALODIA GIBBERULA				P
1SUOVA	SURIRELLA OVATA	P	P	3	8
1SUOVL	SURIRELLA OVALIS	P	P	P	P
1SYDEL	SYNEDRA DELICATISSIMA				1
1SYFAM	SYNEDRA FAMELICA	11	18	33	62
1SYFAS	SYNEDRA FASCICULATA	3	5	14	18
1SYINC	SYNEDRA INCISA	P			
1SYULN	SYNEDRA ULNA			2	6
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	5	3	4	9
2CLOSP	CLOSTERIUM SPP.	P			
2MOUSP	MOUGEOTIA SPP.		- 1		
2OESPP	OEDOGONIUM SPP.	P		P	
2SCSPP	SCENEDESMUS SPP.		P		

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 20
NUMBER OF REPLICATES - 8
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 071879
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	9.2400	13.1000	3.8340	11.6840	20.4800	33.6000	2.7900	3.2400
NUMBER OF TRANSECTS	2	1	1	1	1	1	1	1
NUMBER OF DROPS	15	18	6	19	9	19	9	10

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACMIN	ACHNANTHES SPP.	6	3					1	2
1CAAMP	CALONEIS AMPHISBAENA		P						
1CYCME	CYCLOTELLA MENEGHENIANA	17	15	33	16	4	4	8	11
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA							1	
1DITEE	DIATOMA TENUE VAR. ELONGATUM							1	
1EPSOR	EPITHEMIA SOREX		1						
1FRAVA	FRAGILARIA VAUCHERIAE	3	5					2	
1GOANG	GOMPHONEMA ANGUSTATUM					2			
1GOSUB	GOMPHONEMA SUBCLAVATUM							P	
1GOSPP	GOMPHONEMA SPP.	P							
1GYSPE	GYROSIGMA SPENCERII		P	P	P	1		P	
1HANAM	HANTZSCHIA AMPHIOXYS		P						
1MAGRE	MASTOGLOIA ELLIPTICA	1		6	P	P		2	2
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA			1					
1NAPEL	NAVICULA PELLICULOSA						1		
1NASEA	NAVICULA SECRETA VAR. APICULATA	2	1			1	P		
1NATRI	NAVICULA TRIPUNCTATA		P	P	1	P	1	2	1
1NAVIR	NAVICULA VIRIDULA		1				1		
1NIAPI	NITZSCHIA APICULATA			P	1	1			
1NIDEN	NITZSCHIA DENTICULA	3					P		
1NIFON	NITZSCHIA FONTICOLA	11	10	15	2	2	2	51	26
1NIHOL	NITZSCHIA HOLSATICA		2	2	P	P		2	2
1NILIN	NITZSCHIA LINEARIS				P			P	
1NIMIC	NITZSCHIA MICROCEPHALA							4	
1NIPAL	NITZSCHIA PALEA		1						
1NISPP	NITZSCHIA SPP.		6	1	1	P			P
1RHGIV	RHOPALODIA GIBBA			P					
1RHGIB	RHOPALODIA GIBBERULA		1	4	1	P		P	P
1SUOVA	SURIRELLA OVATA				1		P	1	
1SUOVL	SURIRELLA OVALIS		P		P	1	P	1	P
1SYFAM	SYNEDRA FAMELICA							1	
1SYFAS	SYNEDRA FASCICULATA				2				
1SYPUL	SYNEDRA PULCHELLA	P	3	3		1		10	3
1SYSPP	SYNEDRA SPP.		P			2			
1SYULN	SYNEDRA ULNA	1							
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	2	3	1				1	3
2CHAPR	BULBOCHAETAE SPP.			101				100	102
2MOUSP	MOUGEOTIA SPP.			1				P	2
3PHSPP	PHORMIDIUM SPP.	1	P						

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 21
NUMBER OF REPLICATES = 8
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1. SAMPLE COLLECTION DATE - 071879
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	3.4020	2.8800	4.5180	2.1600	2.7000	1.0800	.5400	1.6560
NUMBER OF TRANSECTS	1	1	1	1	1	1	1	1
NUMBER OF DROPS	10	9	10	10	10	10	10	10

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACMIN	ACHNANTHES SPP.		2	7					
1CAAMP	CALONEIS AMPHISBAENA		P						P
1COCPL	COCCONEIS PLACENTULA								P
1CYCME	CYCLOTELLA MENEGHENIANA	9	63	45	12	19	14	9	34
1CYMCI	CYMBELLA CISTULA	1							
1CYMCY	CYMBELLA CYMBIFORMIS	P							
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA		P	1					1
1ENORN	ENTOMONEIS PALLUDOSA	P	P		P			P	
1FRAVA	FRAGILARIA VAUCHERIAE			15					
1GOSPP	GOMPHONEMA SPP.		P	P					
1GYSPE	GYROSIGMA SPENCERII		P			P	P		P
1HANAM	HANTZSCHIA AMPHIOXYS						1	1	2
1MAGRE	MASTOGLOIA ELLIPTICA			P	1			P	2
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA				1	P	1		
1NACUS	NAVICULA CUSPIDATA		P						P
1NAPEL	NAVICULA PELLICULOSA						1		
1NASEA	NAVICULA SECRETA VAR. APICULATA	1						1	
1NATRI	NAVICULA TRIPUNCTATA	1	2	2		P			2
1NAVIR	NAVICULA VIRIDULA								P
1NASPP	NAVICULA SPP.	P					P		1
1NIAPI	NITZSCHIA APICULATA	P					P		P
1NIFON	NITZSCHIA FONTICOLA	27	106	69	75	25	22	19	100
1NIFRU	NITZSCHIA FRUSTULUM			2			2		2
1NIGRA	NITZSCHIA GRACILIS		P						
1NIHOL	NITZSCHIA HOLSATICA		10	4	7	4	2	1	6
1NILAT	NITZSCHIA LATENS		4	3					P
1NILIN	NITZSCHIA LINEARIS			P					
1NIMIC	NITZSCHIA MICROCEPHALA		10	2	2	1	2	P	9
1NISPP	NITZSCHIA SPP.		P	2		1			
1PIBRE	PINNULARIA BREBISSONII				P				
1RHGIB	RHOPALODIA GIBBERULA	1	2	3	P	P	P	P	9
1SUOVA	SURIRELLA OVATA		P		P				1
1SUOVL	SURIRELLA OVALIS		P	P	P	P	P		P
1SYPUL	SYNEDRA PULCHELLA	2	7	8	6	6	3	P	8
1SYSPP	SYNEDRA SPP.								1
1UNPEN	UNIDENTIFIED PENNATE DIATOMS		3	2					1
2CHAPR	BULBOCHAETAE SPP.	102	13	100	103	100	101	111	25
2CLASP	CLADOPHORA SPP.				P				
2MOUSP	MOUGEOTIA SPP.		P	4	4	1	P	P	
3CALSP	CALOTHRIX SPP.	P				2	P	P	
3ENTRI	ENTOPHYSALIS RIVULARIS				2				
3OSPSE	OSCILLATORIA PSEUDOGEMINATA			1					1
3PHSPP	PHORMIDIUM SPP.	P							

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

ENUMERATION BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 27
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1. SAMPLE COLLECTION DATE - 071879
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	3.0600	1.4400	6.8580	3.0780
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF DROPS	6	6	6	40

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA			1	9
1ACMIN	ACHNANTHES SPP.	3	5	20	20
1AMPER	AMPHORA PERPUSILLA	10	9	41	100
1COCPE	COCCONEIS PEDICULUS			3	
1COCPL	COCCONEIS PLACENTULA	1	2	2	1
1CYCME	CYCLOTELLA MENEGHENIANA		2	5	1
1CYMSO	CYMATOPLEURA SOLEA			P	
1CYMAF	CYMBELLA AFFINIS	2	1	5	P
1CYMCY	CYMBELLA CYMBIFORMIS		1		
1CYMMI	CYMBELLA MINUTA	4	5	16	13
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA			7	
1CYMSI	CYMBELLA SINUATA		3	4	9
1DIVUL	DIATOMA VULGARE	P	3	43	1
1ENORN	ENTOMONEIS PALLUDOSA			P	
1EPSOR	EPITHEMIA SOREX	P	2	1	25
1FRAVA	FRAGILARIA VAUCHERIAE		1	8	4
1GOANG	GOMPHONEMA ANGUSTATUM			1	
1GOCLE	GOMPHONEMA CLEVEI		2		
1GOGRA	GOMPHONEMA GRACILE	1			
1GOINT	GOMPHONEMA INTRICATUM			11	4
1GOOLI	GOMPHONEMA OLIVACEUM	28	26	100	24
1GOPAR	GOMPHONEMA PARVULUM			1	
1GOSPP	GOMPHONEMA SPP.		3	2	
1GYSPE	GYROSIGMA SPENCERII	P			
1HANAM	HANTZSCHIA AMPHIOXYS	P			
1MERCI	MERIDION CIRCULARE			P	
1NAARV	NAVICULA ARVENSIS	7	4	3	3
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	21	24	40	19
1NAHEU	NAVICULA HEUFLERI		P		P
1NANOT	NAVICULA NOTHA			12	5
1NAPEL	NAVICULA PELLICULOSA	12	14	20	24
1NAPYG	NAVICULA PYGMAEA				1
1NARAD	NAVICULA RADIOSA			7	
1NASAI	NAVICULA SALINARUM VAR. INTERMEDIA		5	11	6
1NASEA	NAVICULA SECRETA VAR. APICULATA		1		3
1NASUB	NAVICULA SUBHAMULATA		1		
1NATRI	NAVICULA TRIPUNCTATA	3	1	15	8
1NAVIR	NAVICULA VIRIDULA	5	3	35	15
1NASPP	NAVICULA SPP.			4	10
1NIACI	NITZSCHIA ACICULARIS			1	
1NIAPI	NITZSCHIA APICULATA	P		1	1
1NIDIS	NITZSCHIA DISSIPATA	1	5	1	
1NIFON	NITZSCHIA FONTICOLA	14	15	49	40
1NIFRU	NITZSCHIA FRUSTULUM			1	2
1NIHOL	NITZSCHIA HOLSATICA	8	9	21	45
1NILAT	NITZSCHIA LATENS		1		
1NIMIC	NITZSCHIA MICROCEPHALA	1			
1NIPAL	NITZSCHIA PALEA			3	
1NISPP	NITZSCHIA SPP.	2	2	4	6
1NIVIT	NITZSCHIA VITREA	P			

1RHCUR	RHOICOSPHENIA CURVATA		2	31	1
1RHGIB	RHOPALODIA GIBBERULA				1
1STHAN	STEPHANODISCUS HANTZSCHII				1
1SUANG	SURIRELLA ANGUSTATA		1		
1SUOVA	SURIRELLA OVATA		2	1	2
1SUOVL	SURIRELLA OVALIS			1	
1SYDEL	SYNEDRA DELICATISSIMA	1		1	
1SYULN	SYNEDRA ULNA	4	31	88	25
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	2		11	11
2CLACP	CLADOPHORA SPP.			7	
2MOUCP	MOUCOCIIA SPP.			1	
2STICP	STICHOCOLONIUM SPP.	1	P		P
3CALSP	CALOTHRIX SPP.	P	9	4	P
3LYSPP	LYNGBYA SPP.	250	102	41	22
3SPISP	SPIRULINA SPP.				1
3OSSPP	OSCILLATORIA SPP.	P		4	
3PHSPP	PHORMIDIUM SPP.	P	P		

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 29
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 071879
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	4.6080	23.4400	49.1340	2.3400
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF DROPS	10	10	10	10

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA				1
1ACMIN	ACHNANTHES SPP.	4	6	15	12
1AMPER	AMPHORA PERPUSILLA	101	50	19	26
1CAAMP	CALONEIS AMPHISBAENA				P
1COCPL	COCCONEIS PLACENTULA	1	2	2	
1CYCME	CYCLOTELLA MENEGHENIANA	4	5		3
1CYMAF	CYMBELLA AFFINIS		P	1	2
1CYMMI	CYMBELLA MINUTA	2	5	1	8
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA			1	
1CYMSI	CYMBELLA SINUATA	7	4	2	6
1DIVUL	DIATOMA VULGARE	P	2	P	3
1EPSOR	EPITHEMIA SOREX	2	1	1	3
1FRAPI	FRAGILARIA PINNATA				1
1FRAVA	FRAGILARIA VAUCHERIAE	1	2	2	6
1GOINT	GOMPHONEMA INTRICATUM		1	3	
1GOOLI	GOMPHONEMA OLIVACEUM	6	4	6	36
1GOPAR	GOMPHONEMA PARVULUM			1	
1GOSPP	GOMPHONEMA SPP.				2
1NAARV	NAVICULA ARVENSIS	3	1	1	
1NACRY	NAVICULA CRYPTOCEPHALA				2
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	9	7	10	35
1NANOT	NAVICULA NOTHA	2		1	
1NAPEL	NAVICULA PELLICULOSA	9	11		7
1NARAD	NAVICULA RADIOSA		1		1
1NASAI	NAVICULA SALINARUM VAR. INTERMEDIA		1	P	
1NASEA	NAVICULA SECRETA VAR. APICULATA				4
1NATRI	NAVICULA TRIPUNCTATA	2			6
1NAVIR	NAVICULA VIRIDULA	2	P	2	8
1NASPP	NAVICULA SPP.	5			2
1NIAPI	NITZSCHIA APICULATA				P
1NIDIS	NITZSCHIA DISSIPATA	1		1	
1NIFON	NITZSCHIA FONTICOLA	20	13	4	11
1NIFRU	NITZSCHIA FRUSTULUM				1
1NIHOL	NITZSCHIA HOLSATICA	9	18	19	25
1NILIN	NITZSCHIA LINEARIS		1		
1NISPP	NITZSCHIA SPP.	2	4	2	3
1RHCUR	RHOICOSPHENIA CURVATA	1			1
1SUOVA	SURIRELLA OVATA			1	2
1SYULN	SYNEDRA ULNA	3	5	5	15
1UNPEN	UNIDENTIFIED PENNATE DIATOMS		7	1	5
2CHAPR	BULBOCHAETAE SPP.		4		
3CALSP	CALOTHRIX SPP.	2			3
3LYSPP	LYNGBYA SPP.	78	5		100
3OSSPP	OSCILLATORIA SPP.	1			
3PHSPP	PHORMIDIUM SPP.		7	1	41

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

AUGUST

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 11
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 081379
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0254	.5400	.0254	.0254
NUMBER OF TRANSECTS	5	1	6	10
NUMBER OF DROPS	10	10	10	10

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACMIN	ACHNANTHES SPP.	124	106	147	117
1CYMCY	CYMBELLA CYMBIFORMIS	P			
1CYMMC	CYMBELLA MICROCEPHALA			1	2
1DIHIE	DIATOMA HIEMALE	P			
1FRASP	FRAGILARIA SPP.	P			
1FRAVA	FRAGILARIA VAUCHERIAE	1			
1GOANG	GOMPHONEMA ANGUSTATUM	P			
1GOPAR	GOMPHONEMA PARVULUM			P	
1HANAM	HANTZSCHIA AMPHIOXYS		P		
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	1		1	1
1NAVIR	NAVICULA VIRIDULA	P	P	P	P
1NASPP	NAVICULA SPP.		1		
1NIDEN	NITZSCHIA DENTICULA		P		
1NIFON	NITZSCHIA FONTICOLA	7	2	1	
1NILIN	NITZSCHIA LINEARIS	P			
1SUOVL	SURIRELLA OVALIS	P			
1SYULN	SYNEDRA ULNA	P		P	
2SIISP	STIGEOCLONIUM SPP.	P		P	1
3LYSPP	LYNGBYA SPP.				1
3PHSPP	PHORMIDIUM SPP.	P	19	3	1

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 14
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 081379
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.1800	.0254	.9565	.2923
NUMBER OF TRANSECTS	1	10	1	1
NUMBER OF DROPS	8	8	8	10

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA	P	3	5	
1ACHIN	ACHNANTHES SPP.	121	43	62	110
1AMOVP	AMPHORA OVALIS	P	P	1	P
1CAAMP	CALONEIS AMPHISBAENA	P	P	P	P
1CYCME	CYCLOTELLA MENEGHENIANA		2	5	1
1CYMAF	CYMBELLA AFFINIS	1	1	5	6
1CYMCY	CYMBELLA CYMBIFORMIS	5	3	2	3
1CYMMI	CYMBELLA MINUTA	4	6	6	2
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	1		1	
1DITEG	DIATOMA TENUE VAR. ELONGATUM	5	6	6	
1DIANG	DIATOMA VULGARE VAR. GRANDE	P	10	3	1
1FRACA	FRAGILARIA CAPUCINA			21	5
1FRACR	FRAGELARIA CAPUCINA	3	39		
1FRAPI	FRAGILARIA PINNATA			3	1
1FRAVA	FRAGILARIA VAUCHERIAE	4	5	12	
1GOAFF	GOMPHONEMA AFFINE	1			
1GOANG	GOMPHONEMA ANGUSTATUM	P	2	P	3
1GOPAR	GOMPHONEMA PARVULUM	P	1		
1GOSPP	GOMPHONEMA SPP.			P	
1GYSPE	GYROSIGMA SPENCERII	P	P	P	P
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA		2	2	4
1NACUS	NAVICULA CUSPIDATA	P	P		
1NAPEL	NAVICULA PELLICULOSA	1		1	
1NASEA	NAVICULA SECRETA VAR. APICULATA	4	11	56	9
1NAVIR	NAVICULA VIRIDULA	P	3	2	1
1NIAPI	NITZSCHIA APICULATA	P			
1NIDEN	NITZSCHIA DENTICULA	11	11	10	10
1NIFON	NITZSCHIA FONTICOLA	1	3	8	7
1NIFRU	NITZSCHIA FRUSTULUM		1		1
1NIHOL	NITZSCHIA HOLSATICA	4	10	5	1
1NIMIC	NITZSCHIA MICROCEPHALA			1	
1NISPP	NITZSCHIA SPP.	1		1	1
1NIVIT	NITZSCHIA VITREA		2		
1SUOVA	SURIRELLA OVATA	P	2	6	P
1SUOVL	SURIRELLA OVALIS	P	1	P	P
1SYFAM	SYNEDRA FAMELICA	13	101	103	21
1SYFAS	SYNEDRA FASCICULATA	5	34	16	10
1SYSPP	SYNEDRA SPP.	1	9	4	
1SYULN	SYNEDRA ULNA	P	P	P	P
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	11	2	6	1
2CLOSP	CLOSTERIUM SPP.		P		
2MOUSP	MOUGEOTIA SPP.	1			
2SCINC	SCENEDESMUS INCRASSATULUS	P	P		
2STISP	STIGEOCLONIUM SPP.	P	P		P
4PHSPP	PHACUS SPP.				P

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 20
NUMBER OF REPLICATES - 8
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 081379
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	25.9200	4.8780	2.1600	3.5640	2.5200	1.4400	1.8360	2.2680
NUMBER OF TRANSECTS	1	1	1	1	1	1	1	1
NUMBER OF DROPS	10	10	20	20	20	20	20	20

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACLAN	ACHNANTHES LANCEOLATA	1				1			
1ACMIN	ACHNANTHES SPP.	29	7	20	9	58	13	10	18
1AMOVP	AMPHORA OVALIS					1			
1CAAMP	CALONEIS AMPHISBAENA						P		
1CYCME	CYCLOTELLA MENEGHENIANA	51	44	74	60	48	100	38	90
1CYMAF	CYMBELLA AFFINIS	1		P		P			
1CYMCY	CYMBELLA CYMBIFORMIS	1	P	1	1		P		
1CYMMI	CYMBELLA MINUTA							2	
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA					1			
1CYMSP	CYMBELLA SPP.							2	
1ENORN	ENTOMONEIS PALLUDOSA		1		1			P	
1EPSOR	EPITHEMIA SOREX					P			
1FRACA	FRAGILARIA CAPUCINA	19	15	2	1	P	P	P	2
1FRAPI	FRAGILARIA PINNATA							1	
1FRAVA	FRAGILARIA VAUCHERIAE	4							
1GOANG	GOMPHONEMA ANGUSTATUM	100	4	P	14	5	9	6	9
1GOGRA	GOMPHONEMA GRACILE						5		
1GOPAR	GOMPHONEMA PARVULUM				7	3	P		1
1GYSPE	GYROSIGMA SPENCERII			P			P	P	
1HANAM	HANTZSCHIA AMPHIOXYS			P				1	
1MAGRE	MASTOGLOIA ELLIPTICA				P	P	P		
1NACRY	NAVICULA CRYPTOCEPHALA	8		7	5	3	6	5	10
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	9	8	6	4	2	14	10	12
1NACUS	NAVICULA CUSPIDATA						P		
1NAHEU	NAVICULA HEUFLERI				1		1		
1NANOT	NAVICULA NOTHA						1		
1NAPEL	NAVICULA PELLICULOSA				3	2	4	1	
1NASCA	NAVICULA SECRETA VAR. APICULATA	1		1		1		1	
1NATRI	NAVICULA TRIPUNCTATA	6	4		1	2			2
1NAVIR	NAVICULA VIRIDULA	4	9	7	5	4	5	7	10
1NASPP	NAVICULA SPP.	1	1						
1NIAPI	NITZSCHIA APICULATA			1		P		P	
1NICLA	NITZSCHIA CLAUSII		1						
1NIDEN	NITZSCHIA DENTICULA	4		1	P			1	1
1NIFON	NITZSCHIA FONTICOLA	3	12	12	7	10	23	8	6
1NIFRU	NITZSCHIA FRUSTULUM					1			
1NIHOL	NITZSCHIA HOLSATICA	14	2						
1NILAT	NITZSCHIA LATENS			1					
1NILIN	NITZSCHIA LINEARIS						1	P	
1NIMIC	NITZSCHIA MICROCEPHALA		1	7	2	10	1	3	5
1NIPAL	NITZSCHIA PALEA	1				1			
1NISPP	NITZSCHIA SPP.							4	6
1NISPQ	NITZSCHIA SP. #1	29	100	101	100	100	92	100	100
1PIBOR	PINNULARIA BOREALIS			P			1		
1PISPP	PINNULARIA SPP.								P
1RHGIB	RHOPALODIA GIBBERULA	1	2	1		P	2	1	P
1SUOVA	SURIRELLA OVATA	2		P			P	P	

1SYEAM	SYNEDRA AMBIGUA		1	1	1	1	4	1	4
1SYFAS	SYNEDRA FASCICULATA	1		P	6			P	1
1SYPUL	SYNEDRA PULCHELLA					P	2	P	
1SYULN	SYNEDRA ULNA	2		P	1				
1THAPP	THALASSIOSIRA FLUVIATILIS						2		
1UNCEN	UNIDENTIFIED CENTRIC DIATOMS		1						
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	4		1	2	4	6	1	
2MOUSP	MOUGEOTIA SPP.					P			
2UNCEL	UNIDENTIFIED CHLOROPHYTAN CELL								P
3OSCSP	OSCILLATORIA SPP.					P	P		P
3PHOSP	PHORMIDIUM SPP.				P		P		3

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT.

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 21
NUMBER OF REPLICATES - 8
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 081379
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	1.2600	.7560	.5220	.9540	1.0980	.5400	.5580	.9000
NUMBER OF TRANSECTS	1	1	1	1	1	1	1	1
NUMBER OF DROPS	20	20	20	20	20	20	20	20

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACMIN	ACHNANTHES SPP.	1	4	5	1	1	7	1	4
1AMCOF	AMPHORA COFFEIFORMIS				P	1			
1AMOVP	AMPHORA OVALIS	P							1
1AMPER	AMPHORA PERPUSILLA								P
1CYCME	CYCLOTELLA MENEGHENIANA	22	11	18	37	15	14	15	9
1CYMCY	CYMBELLA CYMBIFORMIS								P
1CYMML	CYMBELLA MINUTA		1						
1DIVUL	DIATOMA VULGARE								P
1ENORN	ENTOMONEIS PALLUDOSA	1					P		
1EPSOR	EPITHEMIA SOREX								P
1FRACA	FRAGILARIA CAPUCINA			P					
1GOANG	GOMPHONEMA ANGUSTATUM	6	3	5	2	5	P	1	1
1GOPAR	GOMPHONEMA PARVULUM	3	4	9	5	7	9	1	6
1GYSPE	GYROSIGMA SPENCERII			P					
1HANAM	HANTZSCHIA AMPHIOXYS	P							
1MAGRE	MASTOGLOIA ELLIPTICA	1		P	2	P			P
1NACIN	NAVICULA CINCTA						1		
1NACRY	NAVICULA CRYPTOCEPHALA	3	1	6	5	4	2	1	P
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	1				2		3	1
1NAHEU	NAVICULA HEUFLERI					P			
1NAPEL	NAVICULA PELLICULOSA		1		2		1	1	1
1NATRI	NAVICULA TRIPUNCTATA			1	3	3	2	1	1
1NAVIR	NAVICULA VIRIDULA	1	1	2	3	1		1	
1NIAPI	NITZSCHIA APICULATA				P		P	P	
1NIFON	NITZSCHIA FONTICOLA	17	100	15	40	48	110	18	54
1NIHOL	NITZSCHIA HOLSATICA				5	11	18	3	
1NIMIC	NITZSCHIA MICROCEPHALA	2	3	1	6	6	7	6	7
1NISPP	NITZSCHIA SPP.	3		7	9	2	1	6	4
1NISPO	NITZSCHIA SP. #1	100	86	101	100	101	65	103	103
1PIBOR	PINNULARIA BOREALIS	P							
1RHGIB	RHOPALODIA GIBBERULA	P		P	P		P		
1SUOVA	SURIRELLA OVATA						P		
1SUOVL	SURIRELLA OVALIS	P	P				P		P
1SYFAS	SYNEDRA FASCICULATA			P	P		P	P	P
1SYPUL	SYNEDRA PULCHELLA		1		P			P	
1THSPP	THALASSIOSIRA FLUVIATILIS							1	
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	3			4		2		
2STISP	STIGEOCLONIUM SPP.	P	P	P	P	P	1	P	1
2UNCEL	UNIDENTIFIED CHLOROPHYTAN CELL		P		P	P	P		P
3ANASP	ANABAENA SPP.					P			
3CALSP	CALOTHRIX SPP.	1							
3DACSP	DACTYLOCOCCOPSIS SPP.				P				P
3OSSPP	OSCILLATORIA SPP.	P				P			
3PHSPP	PHORMIDIUM SPP.	2	1		P	P	7	7	3

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 27
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 081479
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.9360	.9000	1.5480	1.2420
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF DROPS	6	10	10	10

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACMIN	ACHNANTHES SPP.	1	1	5	3
1AMPER	AMPHORA PERPUSILLA	100	100	37	100
1COCPE	COCCONEIS PEDICULUS	P	P		3
1COCPL	COCCONEIS PLACENTULA	1	1	P	9
1CYCME	CYCLOTELLA MENEGHENIANA	1	2	3	3
1CYMAF	CYMBELLA AFFINIS	P	1	2	
1CYMCY	CYMBELLA CYMBIFORMIS	P	1		
1CYMMI	CYMBELLA MINUTA	1		P	
1CYMSI	CYMBELLA SINUATA			P	6
1DIVUL	DIATOMA VULGARE	P	1	1	P
1EPSOR	EPITHEMIA SOREX	12	20	108	10
1GOANG	GOMPHONEMA ANGUSTATUM	4	1	1	
1GOINT	GOMPHONEMA INTRICATUM		1	2	
1GOPAR	GOMPHONEMA PARVULUM			1	1
1GYSPE	GYROSIGMA SPENCERII	P			P
1NAARV	NAVICULA ARVENSIS	1	2	1	1
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA				3
1NANOT	NAVICULA NOTHA	4	2	4	
1NARAD	NAVICULA RADIOSA			1	
1NASAI	NAVICULA SALINARUM VAR. INTERMEDIA	1	P	3	2
1NASEA	NAVICULA SECRETA VAR. APICULATA				P
1NATRI	NAVICULA TRIPUNCTATA	1	P	3	1
1NAVIR	NAVICULA VIRIDULA		P		1
1NASPP	NAVICULA SPP.		1		
1NIDIS	NITZSCHIA DISSIPATA			1	
1NIFON	NITZSCHIA FONTICOLA	7	20	62	24
1NIMIC	NITZSCHIA MICROCEPHALA			1	1
1NISIG	NITZSCHIA SIGMA				P
1NISPP	NITZSCHIA SPP.	5	2	22	8
1NISPO	NITZSCHIA SP. #1	P	1		P
1RHGIV	RHOPALODIA GIBBA	P	P	1	P
1RHCUR	RHOICOSPHENIA CURVATA	P		1	P
1SYPUL	SYNEDRA PULCHELLA				1
1SYULN	SYNEDRA ULNA	P	P	P	P
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	7	1	6	8
2STISP	STIGEOCLONIUM SPP.	P		1	P
3ANASP	ANABAENA SPP.		P		
3CALSP	CALOTHRIX SPP.	10	7	24	22
3LYSPP	LYNGBYA SPP.	16	34	23	50
3OSSPP	OSCILLATORIA SPP.	P			
3PHSPP	PHORMIDIUM SPP.	3		3	

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 22
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 081479
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	2.3580	3.2580	2.2500	3.0600
NUMBER OF TRANSECTS	1	1	1	2
NUMBER OF DROPS	16	16	16	16

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACMIN	ACHNANTHES SPP.	17	5	4	27
1AMPER	AMPHORA PERPUSILLA	7	5	14	100
1CAAMP	CALONEIS AMPHISBAENA			P	
1COCPE	COCCONEIS PEDICULUS			P	
1COCPL	COCCONEIS PLACENTULA	26	100	100	23
1CYCME	CYCLOTELLA MENEGHENIANA	7	17	9	6
1CYMAF	CYMBELLA AFFINIS	4	1	P	2
1CYMMI	CYMBELLA MINUTA		1		1
1CYMSI	CYMBELLA SINUATA	7	5	7	3
1DIVUL	DIATOMA VULGARE	1	P	P	P
1ENORN	ENTOMONEIS PALLUDOSA				P
1EPSOR	EPITHEMIA SOREX	100	10	19	92
1EPTUR	EPITHEMIA TURGIDA			P	
1FRASP	FRAGILARIA SPP.	2	P		
1GOINT	GOMPHONEMA INTRICATUM	34	17	10	15
1GOOLI	GOMPHONEMA OLIVACEUM				P
1GOPAR	GOMPHONEMA PARVULUM		1		1
1GYSPE	GYROSIGMA SPENCERII		1		
1HANAM	HANTZSCHIA AMPHIOXYS	1			
1NAARV	NAVICULA ARVENSIS				2
1NACRY	NAVICULA CRYPTOCEPHALA		P	1	9
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	1		1	
1NANOT	NAVICULA NOTHA	3		1	2
1NAPEL	NAVICULA PELLICULOSA				2
1NASEA	NAVICULA SECRETA VAR. APICULATA	4		1	
1NATRI	NAVICULA TRIPUNCTATA	1		P	1
1NAVIR	NAVICULA VIRIDULA		P		
1NIDIS	NITZSCHIA DISSIPATA			1	
1NIFON	NITZSCHIA FONTICOLA	18	13	14	47
1NILIN	NITZSCHIA LINEARIS			P	
1NIMIC	NITZSCHIA MICROCEPHALA				1
1NISPP	NITZSCHIA SPP.	4	3	6	12
1NISPO	NITZSCHIA SP. #1		5		2
1RHGIV	RHOPALODIA GIBBA			P	P
1RHCUR	RHOICOSPHENIA CURVATA	4	1	2	3
1SUOVL	SURIRELLA OVALIS	P			
1SYFAM	SYNEDRA FAMELICA				1
1SYULN	SYNEDRA ULNA	P	P	P	
1THSPP	THALASSIOSIRA FLUVIATILIS		1		1
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	2	2	1	7
2CLASP	CLADOPHORA SPP.	P			
2STISP	STIGEOCLONIUM SPP.		P		P
3ANASP	ANABAENA SPP.			1	
3CALSP	CALOTHRIX SPP.	2		27	8
3LYSPP	LYNGBYA SPP.		3	5	
3OSSPP	OSCILLATORIA SPP.		1	1	1
3PHSPP	PHORMIDIUM SPP.	P		2	3

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

OCTOBER

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 13
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 100879
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0255	.0255	.0255	.0255
NUMBER OF TRANSECTS	6	6	6	6
NUMBER OF DROPS	9	9	9	9

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACMIN	ACHNANTHES SPP.	658	181	383	415
1CAAMP	CALONEIS AMPHISBAENA	P		P	
1CYMAF	CYMBELLA AFFINIS	P		P	P
1CYMMI	CYMBELLA MINUTA		P		
1FRAVA	FRAGILARIA VAUCHERIAE	8	2	3	1
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	1	1	2	1
1NAVIR	NAVICULA VIRIDULA	1	1	1	
1NASPP	NAVICULA SPP.				P
1NIAPI	NITZSCHIA APICULATA			P	
1NISPP	NITZSCHIA SPP.	1		1	1
1NIVIT	NITZSCHIA VITREA	1	P	1	P
1SUOVA	SURIRELLA OVATA	P	P	P	1
1SUOVL	SURIRELLA OVALIS	P		P	
1SYRAD	SYNEDRA RADIANS	1	1	P	P
2CLOSP	CLOSTERIUM SPP.	P			
2MOUSP	MOUGEOTIA SPP.			1	
2STISP	STIGEOCLONIUM SPP.	P		P	P
3PHSPP	PHORMIDIUM SPP.	P	9	10	8

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 14
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 100879
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0255	.0255	.0255	1.0800
NUMBER OF TRANSECTS	8	6	7	1
NUMBER OF DROPS	7	7	7	7

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA	2	5	3	15
1ACMIN	ACHNANTHES SPP.	105	205	100	45
1AMOVP	AMPHORA OVALIS	P	P	P	P
1CAAMP	CALONEIS AMPHISBAENA	P	P	P	
1COCPL	COCCONEIS PLACENTULA	P	P		2
1CYCME	CYCLOTELLA MENEGHENIANA	P	P	P	
1CYMAF	CYMBELLA AFFINIS	98	35	8	8
1CYMCY	CYMBELLA CYMBIFORMIS	1	P	P	P
1CYMMI	CYMBELLA MINUTA	11	2	P	2
1DITEE	DIATOMA TENUE VAR. ELONGATUM	1	2	2	2
1ENORN	ENTOMONEIS PALLUDOSA	1			P
1FRACA	FRAGILARIA CAPUCINA		2	P	5
1FRAVA	FRAGILARIA VAUCHERIAE	2	4	4	37
1GOANG	GOMPHONEMA ANGUSTATUM	8	1	P	17
1GOPAR	GOMPHONEMA PARVULUM	P	P		
1GYSPE	GYROSIGMA SPENCERII	P	P		
1NAARV	NAVICULA ARVENSIS				14
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA				16
1NACUS	NAVICULA CUSPIDATA	P			
1NAHEU	NAVICULA HEUFLERI				P
1NANOT	NAVICULA NOTHA	1			3
1NAPEL	NAVICULA PELLICULOSA	2	7	1	
1NASEA	NAVICULA SECRETA VAR. APICULATA	13	4	6	29
1NAVIR	NAVICULA VIRIDULA	P	P	2	3
1NIACI	NITZSCHIA ACICULARIS	P	1		17
1NIAPI	NITZSCHIA APICULATA	P		P	P
1NIDEN	NITZSCHIA DENTICULA	22	6	9	7
1NIFON	NITZSCHIA FONTICOLA				9
1NIFRU	NITZSCHIA FRUSTULUM				2
1NILIN	NITZSCHIA LINEARIS			P	2
1NISPP	NITZSCHIA SPP.	2	P	2	76
1NISP0	NITZSCHIA SP. #1				68
1PIBRE	PINNULARIA BREBISSONII				P
1PISPP	PINNULARIA SPP.	P	P	P	P
1SUOVA	SURIRELLA OVATA	2	P	1	21
1SUOVL	SURIRELLA OVALIS	P	P	P	P
1SYFAM	SYNEDRA FAMELICA	90	11	10	100
1SYFAS	SYNEDRA FASCICULATA	27	4	4	23
1SYRAD	SYNEDRA RADIANS				35
1SYULN	SYNEDRA ULNA	1	P	P	3
1THSPP	THALASSIOSIRA FLUVIATILIS	11	1	2	7
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	3	5	3	5
2CHARS	CHARACIUM SP.		P		
2CLOSP	CLOSTERIUM SPP.		P	P	P
2MOUSP	MOUGEOTIA SPP.				P
2SPISP	SPIROGYRA SPP.	P	P		
2STISP	STIGEOCLONIUM SPP.	P	P	P	
3MERPU	MERISMOPEDIA PUNCTATA			P	
3PHSPP	PHORMIDIUM SPP.	P	P	1	

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 32
NUMBER OF REPLICATES - 8
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 100879
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	.4320	.5760	.6300	.6480	.6840	.7020	.5580	.3240
NUMBER OF TRANSECTS	1	1	1	1	1	1	1	1
NUMBER OF DROPS	20	20	20	20	20	20	20	20

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACMIN	ACHNANTHES SPP.	100	102	100	101	102	108	108	100
1CAAMP	CALONEIS AMPHISBAENA	P		P					
1COCPL	COCCONEIS PLACENTULA		P						
1CYCME	CYCLOTELLA MENEGHENIANA	3	2	7	8	6	1	14	1
1CYMMI	CYMBELLA MINUTA		2			2			
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	1							
1ENORN	ENTOMONEIS PALLUDOSA				P	P	P		P
1EPSOR	EPITHEMIA SOREX								P
1FRAVA	FRAGILARIA VAUCHERIAE				1				
1GOANG	GOMPHONEMA ANGUSTATUM				P				
1GYSPE	GYROSIGMA SPENCERII			P					
1HANAM	HANTZSCHIA AMPHIOXYS							1	
1NACRY	NAVICULA CRYPTOCEPHALA	P	2	1	1	P		1	1
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	P		1					
1NAPEL	NAVICULA PELLICULOSA		1						
1NASEA	NAVICULA SECRETA VAR. APICULATA								1
1NAVIR	NAVICULA VIRIDULA				1	4	P		P
1NASPP	NAVICULA SPP.					1			
1NIACI	NITZSCHIA ACICULARIS					P	P		
1NIAPI	NITZSCHIA APICULATA			P		P	P		P
1NIFON	NITZSCHIA FONTICOLA		7	1	2		P		1
1NIHUN	NITZSCHIA HUNGARICA	P							
1NILIN	NITZSCHIA LINEARIS		P			P		P	
1NIMIC	NITZSCHIA MICROCEPHALA	2		1		1	1		
1NISPP	NITZSCHIA SPP.		4	1	1	1		2	
1NISPO	NITZSCHIA SP. #1	1	P	2	7	6	6	6	2
1PLDEL	PLEUROSIGMA DELICATISSIMA				P				
1RHGIB	RHOPALODIA GIBBERULA				P				
1SUOVA	SURIRELLA OVATA	P	P		P	2	P	1	P
1SUOVL	SURIRELLA OVALIS	P	P	P	P	P	P	P	P
1SYFAS	SYNEDRA FASCICULATA	P			P				
1SYPUL	SYNEDRA PULCHELLA			P					
1SYRAD	SYNEDRA RADIANS	P							
1UNPEN	UNIDENTIFIED PENNATE DIATOMS			1					
2STISP	STIGEOCLONIUM SPP.		P						
3LYSPP	LYNGBYA SPP.	P							
3MERPU	MERISMOPEDIA PUNCTATA					P			
3PHSPP	PHORMIDIUM SPP.	P	3	1	2	P	P		

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 21
NUMBER OF REPLICATES - 8
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 100879
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	.3500	.2700	.2880	.5760	.0255	.6840	.5580	.5400
NUMBER OF TRANSECTS	1	1	1	1	6	1	1	1
NUMBER OF DROPS	20	20	20	20	20	20	20	20

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACMIN	ACHNANTHES SPP.	101	103	104	100	121	110	101	101
1CYCME	CYCLOTELLA MENEGHENIANA	P	2	3	3	4	2	4	1
1CYMAF	CYMBELLA AFFINIS			P	P			P	
1CYMMI	CYMBELLA MINUTA						1		
1ENORN	ENTOMONEIS PALLUDOSA	P	P		P	P	P	P	
1EPSOR	EPITHEMIA SOREX					P			P
1FRAVA	FRAGILARIA VAUCHERIAE	P						P	
1GYSPE	GYROSIGMA SPENCERII			P			P		
1HANAM	HANTZSCHIA AMPHIOXYS	1			2		1		
1NACRY	NAVICULA CRYPTOCEPHALA		P	3	P	1	P	8	1
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA				P				
1NACUS	NAVICULA CUSPIDATA	2							
1NAVIR	NAVICULA VIRIDULA						P		
1NASPP	NAVICULA SPP.							P	
1NIACI	NITZSCHIA ACICULARIS			P	P	P		1	P
1NIAPI	NITZSCHIA APICULATA					3			6
1NIFON	NITZSCHIA FONTICOLA						P		
1NIHUN	NITZSCHIA HUNGARICA			P	P	P			
1NILIN	NITZSCHIA LINEARIS		1	1	P			1	1
1NIMIC	NITZSCHIA MICROCEPHALA	1				P	1	2	
1NISPP	NITZSCHIA SPP.	3	5	1	10	4	2	8	8
1NISPO	NITZSCHIA SP. #1								P
1PISPP	PINNULARIA SPP.	P							
1PLDEL	PLEUROSIGMA DELICATISSIMA					P			
1RHGIV	RHOPALODIA GIBBA				P				
1STHAN	STEPHANODISCUS HANTZSCHII								
1SUOVA	SURIRELLA OVATA	P	P	P	P	P	P	P	
1SUOVL	SURIRELLA OVALIS	P	P	P	P	P	P	P	P
1SYPUL	SYNEDRA PULCHELLA	P							
1SYRAD	SYNEDRA RADIANS	P							
1SYSPP	SYNEDRA SPP.			P		2			
1UNPEN	UNIDENTIFIED PENNATE DIATOMS			2		1			
2CHAPR	BULBOCHAETAE SPP.					P			
3CALSP	CALOTHRIX SPP.				P				
3MERPU	MERISMOPEDIA PUNCTATA	P		P				P	
3OSSPP	OSCILLATORIA SPP.								
3PHSPP	PHORMIDIUM SPP.	1	1	1		2	20	16	

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 27
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.? SAMPLE COLLECTION DATE - 100979
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	1.4040	2.3580	1.4220	1.4040
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF DROPS	7	7	7	7

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACMIN	ACHNANTHES SPP.	6	32	32	15
1AMPER	AMPHORA PERPUSILLA	3	3	8	3
1CAAMP	CALONEIS AMPHISBAENA	P		P	
1COCPE	COCCONEIS PEDICULUS	4	4	7	2
1COCPL	COCCONEIS PLACENTULA	1	6	5	7
1CYCME	CYCLOTELLA MENEGHENIANA	P	2	2	3
1CYMSO	CYMATOPLEURA SOLEA			P	
1CYMAF	CYMBELLA AFFINIS	4	1	1	6
1CYMCY	CYMBELLA CYMBIFORMIS	1			
1CYMSI	CYMBELLA SINUATA	1	1		
1DITEE	DIATOMA TENUE VAR. ELONGATUM		P		
1DIVUL	DIATOMA VULGARE	1	2	2	4
1EPSOR	EPITHEMIA SOREX	100	100	100	103
1EPTUR	EPITHEMIA TURGIDA	1		P	
1GOINT	GOMPHONEMA INTRICATUM	1	8	8	10
1GOPAR	GOMPHONEMA PARVULUM		1		
1GYSPE	GYROSIGMA SPENCERII	P		P	
1HAARC	HANNAEA ARCUS	P			
1HANAM	HANTZSCHIA AMPHIOXYS	P			
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA		4	5	6
1NAVOT	NAVICULA NOTHA			5	
1NAPUP	NAVICULA PUPULA	P	1		
1NASAI	NAVICULA SALINARUM VAR. INTERMEDIA	7	8	8	33
1NATRI	NAVICULA TRIPUNCTATA	5	3	5	5
1NAVIR	NAVICULA VIRIDULA	P	1	5	3
1NIAPI	NITZSCHIA APICULATA	1			
1NIDIS	NITZSCHIA DISSIPATA		1		
1NIFON	NITZSCHIA FONTICOLA	1	5	3	6
1NILIN	NITZSCHIA LINEARIS	P	3	P	
1NIMIC	NITZSCHIA MICROCEPHALA			2	
1NISIG	NITZSCHIA SIGMA				1
1NISPP	NITZSCHIA SPP.	14	8	19	31
1NISP0	NITZSCHIA SP. #1		2	3	
1PLDEL	PLEUROSIGMA DELICATISSIMA	P			
1RHGIV	RHOPALODIA GIBBA			P	P
1RHCUR	RHOICOSPHENIA CURVATA	11	9	15	16
1RHGIB	RHOPALODIA GIBBERULA	P	P		
1SUOVA	SURIRELLA OVATA			P	1
1SYSPP	SYNEDRA SPP.			5	
1SYULN	SYNEDRA ULNA			2	
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	6	3	9	7
2CLASP	CLADOPHORA SPP.	P	P		P
2STISP	STIGEOCLONIUM SPP.	P		P	P
3CALSP	CALOTHRIX SPP.	21	25	10	65
3LYSPP	LYNGBYA SPP.	27	30	23	81
3OSSPP	OSCILLATORIA SPP.		2	P	
3PHSPP	PHORMIDIUM SPP.	P	5	28	

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 29
NUMBER OF REPLICATES - 4
COVERSLIP AREA - 625 MM2 DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.1 SAMPLE COLLECTION DATE - 100979
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - HIATT PROJECT NO. - 116

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	6.9120	3.8520	2.8800	.9540
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF DROPS	9	9	9	9

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACMIN	ACHNANTHES SPP.	21	44	36	101
1AMPER	AMPHORA PERPUSILLA	10	6	4	5
1CAAMP	CALONEIS AMPHISBAENA			P	
1COCPE	COCCONEIS PEDICULUS	5	2	3	3
1COCPL	COCCONEIS PLACENTULA	34	13	14	6
1CYCME	CYCLOTELLA MENEGHENIANA	5	7	4	1
1CYMAF	CYMBELLA AFFINIS	2	8	2	12
1CYMMI	CYMBELLA MINUTA		1		
1CYMSI	CYMBELLA SINUATA	50	12	10	11
1CYMSP	CYMBELLA SPP.				P
1DIVUL	DIATOMA VULGARE	P	2	P	P
1ENORN	ENTOMONEIS PALLUDOSA		P		
1EPSOR	EPITHEMIA SOREX	102	100	100	61
1EPTUR	EPITHEMIA TURGIDA				P
1FRAVA	FRAGILARIA VAUCHERIAE	3	1		
1GOHER	GOMPHONEIS HERCULEANA			P	
1GOCLE	GOMPHONEMA CLEVEI		4		
1GOINT	GOMPHONEMA INTRICATUM	24	28	8	25
1GOOLI	GOMPHONEMA OLIVACEUM	2	1		
1GOPAR	GOMPHONEMA PARVULUM				3
1GOTRU	GOMPHONEMA TRUNCATUM			1	
1GOSPP	GOMPHONEMA SPP.		5	2	3
1GYSPE	GYROSIGMA SPENCERII		P	P	
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	3	13	3	3
1NANOT	NAVICULA NOTHA	2	2	3	
1NASAI	NAVICULA SALINARUM VAR. INTERMEDIA	5	27	8	4
1NASEA	NAVICULA SECRETA VAR. APICULATA			2	
1NATRI	NAVICULA TRIPUNCTATA	2	4	4	7
1NAVIR	NAVICULA VIRIDULA		1		2
1NIAPI	NITZSCHIA APICULATA			P	
1NIDIS	NITZSCHIA DISSIPATA				1
1NIFON	NITZSCHIA FONTICOLA	13	3	2	21
1NIHOL	NITZSCHIA HOLSATICA		6	3	
1NILAT	NITZSCHIA LATENS		P	1	
1NILIN	NITZSCHIA LINEARIS			1	
1NIMIC	NITZSCHIA MICROCEPHALA	2	2	3	3
1NISPP	NITZSCHIA SPP.	25	40	38	52
1NISP1	NITZSCHIA SP. #1		1		
1RHGIB	RHOPALODIA GIBBA		P	P	
1RHCUR	RHOICOSPHENIA CURVATA	8	21	19	7
1SUOVA	SURIRELLA OVATA			1	1
1SUOVL	SURIRELLA OVALIS		P	P	P
1SYULN	SYNEDRA ULNA		P		
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	7	10	4	10
2CLASP	CLADOPHORA SPP.				P
2MOUSP	MOUGEOTIA SPP.				8
3CALSP	CALOTHRIX SPP.	20		P	2
3LYSPP	LYNGBYA SPP.	40	10	20	22
3OSSPP	OSCILLATORIA SPP.				P
3PHSPP	PHORMIDIUM SPP.	6	3		3
4EUSPP	EUGLENA SPP.			P	

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

APPENDIX 4-4

Periphyton Biomass Data for all Stations by Sampling Date for 1979

PERIPHYTON BIOMASS BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - APRIL 1979
ANALYST - HIATT
AREA SCRAPED - 50 CM2

LOG #	STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)
60-116	13A	110.9395	110.8476
61-116	13B	105.8455	105.7637
62-116	14A	104.4997	104.4375
63-116	14B	108.8818	108.8448
64-116	20A	113.6400	113.5831
65-116	20B	112.8262	112.8048
66-116	21A	154.2554	154.1905
67-116	21B	113.0923	112.9931
68-116	27A	115.3901	115.2829
69-116	27B	93.7542	93.6149
70-116	29A	104.0629	104.0224
71-116	29B	106.1297	106.1008

PERIPHYTON BIOMASS BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - MAY 1979
ANALYST - HIATT
AREA SCRAPED - 50 CM2

LOG #	STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)
108-116	13A	109.2024	109.1722
109-116	13B	105.1731	105.1448
110-116	14A	114.0188	113.9331
111-116	14B	113.5049	113.4569
112-116	20A	104.2898	104.2568
113-116	20B	104.1972	104.1704
114-116	21A	92.4003	92.3805
115-116	21B	107.5368	107.4550

PERIPHYTON BIOMASS BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - JUNE 1979
ANALYST - HIATT
AREA SCRAPED - 50 CM2

LOG #	STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)
152-116	13A	106.9281	106.8675
153-116	13B	108.8462	108.8267
154-116	14A	117.4997	117.2949
155-116	14B	104.7373	104.7038
156-116	20A	104.6041	104.5131
157-116	20B	105.7027	105.5940
158-116	21A	113.4686	113.3513
159-116	21B	92.6006	92.5219

PERIPHYTON BIOMASS BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - JULY 1979
ANALYST - HIATT
AREA SCRAPED - 50 CM2

LOG #	STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)
243-116	13A	112.7789	112.7324
244-116	13B	104.8855	104.8749
245-116	14A	106.7737	106.7149
246-116	14B	113.5486	113.5085
247-116	20A	104.9717	104.9534
248-116	20B	103.8795	103.8693
249-116	21A	92.6723	92.5418
250-116	21B	113.0941	112.9512
251-116	27A	114.3593	114.2936
252-116	27B	114.3199	114.2349
253-116	29A	104.4114	104.3437
254-116	29B	108.6534	108.6489

PERIPHYTON BIOMASS BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - AUGUST 1979
ANALYST - HIATT
AREA SCRAPED - 50 CM2

LOG #	STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)
305-116	13A	105.0233	105.0092
306-116	13B	105.0097	104.9824
307-116	14A	114.2819	114.1963
308-116	14B	104.4171	104.3480
309-116	20A	113.3095	113.2786
310-116	20B	104.4093	104.3537
311-116	21A	106.1569	106.1278
312-116	21B	114.3843	114.3293
313-116	27A	113.7688	113.6201
314-116	27B	113.8254	113.7166
315-116	29A	108.8223	108.7850
316-116	29B	92.4403	92.3805

PERIPHYTON BIOMASS BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - OCTOBER 1979
ANALYST - HIATT
AREA SCRAPED - 50 CM2

LOG #	STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)
382-116	13A	104.1687	104.1125
383-116	13B	113.9284	113.8642
384-116	14A	108.7950	108.6558
385-116	14B	106.6369	106.5147
386-116	20A	112.6646	112.6380
387-116	20B	92.2669	92.2538
388-116	21A	112.3430	112.3144
389-116	21B	106.0924	106.0639
390-116	27A	115.1510	114.8281
391-116	27B	116.5708	116.2392
392-116	29A	112.5945	111.9099
393-116	29B	110.4269	110.0872

APPENDIX 4-5

Periphyton Density and Species Diversity Calculations
for all Stations by Sampling Date for 1979

APRIL

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 042579

STATION NUMBER - 13
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	.0	21.4	8.2	5.3					8.7	9.1
ACHNANTHES SPP.	1307.9	2179.5	57.4	76.0					905.2	1031.6
DIATOMA SPP.	.0	.0	4.1	.0					1.0	2.0
FRAGILARIA VAUCHERIAE	81.0	961.5	409.8	5.3					364.4	435.1
GOMPHONEMA ANGUSTATUM	11.6	64.1	8.2	1.8					21.4	28.8
GOMPHONEMA PARVULUM	11.6	.0	.0	.0					2.9	5.8
NAVICULA ARVENSIS	.0	.0	.0	1.8					.4	.9
NAVICULA CRYPTOCEPHALA VAR. VENETA	11.6	21.4	16.4	5.3					13.7	6.9
NAVICULA HEUFLERI	.0	.0	4.1	5.3					2.3	2.8
NAVICULA PELLICULOSA	23.1	.0	.0	5.3					7.1	11.0
NAVICULA PYGMAEA	11.6	.0	.0	.0					2.9	5.8
NAVICULA SECRETA VAR. APICULATA	11.6	21.4	4.1	19.4					14.1	7.9
NAVICULA VIRIDULA	11.6	106.8	4.1	3.5					31.5	50.4
NITZSCHIA FONTICOLA	23.1	21.4	.0	.0					11.1	12.9
NITZSCHIA FRUSTULUM	.0	21.4	.0	10.6					8.0	10.2
NITZSCHIA HOLSATICA	.0	.0	12.3	1.8					3.5	5.9
NITZSCHIA PALEA	.0	.0	4.1	.0					1.0	2.0
NITZSCHIA TRYBLIONELLA VAR. LEVIDENS	.0	.0	.0	1.8					.4	.9
NITZSCHIA SPP.	.0	.0	.0	8.8					2.2	4.4
SURIRELLA OVATA	.0	.0	8.2	1.8					2.5	3.9
SYNEDRA FAMELICA	.0	277.8	32.8	1.8					78.1	134.0
UNIDENTIFIED PENNATE DIATOMS	.0	.0	8.2	.0					2.0	4.1
DIVISION TOTAL	1504.6	3696.6	582.0	155.5					1484.7	
CHLOROPHYTA										
CYANOPHYTA										
PHORMIDIUM SRP.	1909.7	9978.6	520.5	183.7					3148.1	4614.5
DIVISION TOTAL	1909.7	9978.6	520.5	183.7					3148.1	
EUGLENOPHYTA										
TOTAL DENSITY	3414.4	13675.2	1102.5	339.2					4632.8	

DIVERSITY INDEX CALCULATION

SAMPLE SIZE =
VARIANCE =
MAXIMUM IND =

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 042579

STATION NUMBER - 14
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	135.0	229.7	196.9	78.7					160.1	66.9
ACHNANTHES SPP.	2218.4	8399.0	11456.7	866.1					5735.0	5030.1
CYCLOTELLA MENEGHENIANA	.0	32.8	.0	13.1					11.5	15.5
CYMBELLA AFFINIS	19.3	.0	39.4	13.1					17.9	16.4
CYMBELLA CYMBIFORMIS	.0	.0	39.4	.0					9.8	19.7
FRAGILARIA VAUCHERIAE	115.7	131.2	39.4	13.1					74.9	57.5
GOMPHONEMA ANGUSTATUM	289.4	492.1	315.0	.0					274.1	203.8
GOMPHONEMA PARVULUM	.0	.0	.0	13.1					3.3	6.6
HANTZSCHIA AMPHIOXYS	19.3	.0	.0	.0					4.8	9.6
MERIDION CIRCULARE	.0	.0	39.4	.0					9.8	19.7
NAVICULA ARVENSIS	1292.4	1312.3	5905.5	1850.4					2590.2	2225.3
NAVICULA CRYPTOCEPHALA VAR. VENETA	38.6	32.8	.0	.0					17.8	20.7
NAVICULA HEUFLERI	19.3	.0	.0	13.1					8.1	9.7
NAVICULA PELLICULOSA	617.3	131.2	315.0	196.9					315.1	215.3
NAVICULA SECRETA VAR. APICULATA	347.2	164.0	236.2	52.5					200.0	123.9
NAVICULA VIRIDULA	.0	.0	39.4	.0					9.8	19.7
NITZSCHIA ACICULARIS	.0	.0	.0	13.1					3.3	6.6
NITZSCHIA AMPHIBIA	19.3	.0	.0	.0					4.8	9.6
NITZSCHIA DENTICULA	77.2	32.8	.0	13.1					30.8	33.7
NITZSCHIA DISSIPATA	19.3	.0	.0	.0					4.8	9.6
NITZSCHIA FONTICOLA	77.2	131.2	.0	.0					52.1	64.1
NITZSCHIA FRUSTULUM	212.2	.0	39.4	26.2					69.5	96.6
NITZSCHIA HOLSATICA	173.6	.0	78.7	13.1					66.4	79.4
NITZSCHIA LATENS	19.3	.0	.0	.0					4.8	9.6
NITZSCHIA LINEARIS	.0	.0	.0	13.1					3.3	6.6
NITZSCHIA SPP.	38.6	.0	157.5	13.1					52.3	71.9
SURIRELLA OVATA	19.3	32.8	.0	.0					13.0	16.0
SYNEDRA FAMELICA	424.4	.0	196.9	26.2					161.9	195.6
SYNEDRA FASCICULATA	96.5	98.4	196.9	52.5					111.1	61.0
SYNEDRA ULNA	.0	.0	39.4	.0					9.8	19.7
UNIDENTIFIED PENNATE DIATOMS	96.5	.0	157.5	13.1					66.8	74.0
DIVISION TOTAL	6385.0	11220.5	19488.2	3294.0					10096.9	
CHLOROPHYTA										
CYANOPHYTA										
ENTOPHYSALIS RIVULARIS	.0	.0	.0	262.5					65.6	131.2
DIVISION TOTAL	.0	.0	.0	262.5					65.6	
EUGLENOPHYTA										
TOTAL DENSITY	6385.0	11220.5	19488.2	3556.4					10162.5	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.468
VARIANCE = .0002
MAXIMUM INDEX = 3.466
EVENNESS = .424

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RROSC AQUATIC SURVEYS
SAMPLE DATE: 042579

STATION NUMBER - 20
NUMBER OF REPITITIONS - 8

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	.0	.0	4.5	5.2	.0	4.5	.0	.0	1.8	2.5
ACHNANTHES SPP.	33.3	.0	2.3	67.1	22.5	6.8	23.5	11.2	20.8	22.0
COCCONEIS PLACENTULA	.0	.0	.0	.0	.0	.0	.0	2.8	.4	1.
CYMBELLA MINUTA VAR. SILESIACA	22.2	.0	.0	.0	.0	3.4	2.3	5.6	4.2	7.6
ENTOMONEIS PALLUDOSA	22.2	.0	11.3	5.2	.0	1.1	4.7	5.6	6.3	7.4
FRAGILARIA VAUCHERIAE	1011.1	142.0	72.1	242.8	287.2	88.6	100.9	149.0	261.7	312.0
GOMPHONEMA ANGUSTATUM	.0	.0	2.3	.0	.0	1.1	2.3	5.6	1.4	2.0
GOMPHONEMA OLIVACEUM	111.1	.0	.0	25.8	28.2	13.6	14.1	84.4	34.6	40.9
GOMPHONEMA PARVULUM	.0	.0	.0	.0	.0	3.4	.0	.0	.4	1.2
NAVICULA ARVENSIS	.0	.0	.0	5.2	42.2	.0	14.1	2.8	8.0	14.6
NAVICULA CRYPTOCEPHALA	11.1	.0	.0	5.2	.0	5.7	.0	8.4	3.8	4.4
NAVICULA PELLICULOSA	1266.7	3437.5	60.8	625.0	188.6	32.9	115.0	104.0	728.8	1172.7
NAVICULA PYGMAEA	.0	.0	.0	.0	5.6	.0	.0	.0	.7	2.0
NAVICULA SECRETA VAR. APICULATA	22.2	.0	20.3	.0	.0	5.7	.0	2.8	6.4	9.4
NITZSCHIA APICULATA	11.1	28.4	18.0	.0	8.4	3.4	.0	2.8	9.0	10.0
NITZSCHIA DISSIPATA	66.7	.0	.0	.0	2.8	.0	.0	.0	8.7	23.4
NITZSCHIA FONTICOLA	455.6	1051.1	6.8	232.4	39.4	21.6	18.8	28.1	231.7	366.5
NITZSCHIA FRUSTULUM	22.2	28.4	9.0	15.5	.0	1.1	7.0	2.8	10.8	10.4
NITZSCHIA HOLSATICA	1177.8	1590.9	85.6	516.5	92.9	54.5	279.3	5.6	475.4	594.5
NITZSCHIA LINEARIS	.0	.0	2.3	.0	.0	.0	.0	.0	.3	.8
NITZSCHIA SPP.	55.6	56.8	38.3	36.2	8.4	4.5	11.7	16.9	28.6	21.0
PINNULARIA BREBISSONII	.0	.0	.0	5.2	.0	.0	.0	.0	.6	1.8
SURIRELLA OVATA	866.7	255.7	243.2	227.3	177.4	113.5	77.5	281.2	280.3	247.3
SURIRELLA OVALIS	11.1	56.8	24.8	20.7	.0	2.3	.0	2.8	14.8	19.5
SYNEDRA AMPHICEPHALA	22.2	.0	.0	.0	.0	.0	.0	19.7	5.2	9.7
SYNEDRA FAMELICA	77.8	.0	4.5	67.1	11.3	29.5	2.3	11.2	25.5	30.5
SYNEDRA INCISA	.0	.0	.0	.0	.0	.0	.0	2.8	.4	1.
UNIDENTIFIED PENNATE DIATOMS	.0	56.8	11.3	.0	.0	2.3	.0	11.2	10.2	19.5
DIVISION TOTAL	5266.7	6704.5	617.1	2102.3	915.0	399.6	673.7	767.7	2180.8	
CHLOROPHYTA										
STIGEOCLONIUM SPP.	.0	.0	.0	.0	.0	6.8	.0	5.6	1.6	2.9
DIVISION TOTAL	.0	.0	.0	.0	.0	6.8	.0	5.6	1.6	
CYANOPHYTA										
EUGLENOPHYTA										
TOTAL DENSITY	5266.7	6704.5	617.1	2102.3	915.0	406.4	673.7	773.3	2182.4	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.921
VARIANCE = .0006
MAXIMUM INDEX = 3.367
EVENNESS = .571
NO OF SPECIES = 29

PERIPHYTON - ASSEMBLAGE SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 42579

STATION NUMBER - 21
NUMBER OF REPITITIONS - 8

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	.0	8.8	8.0	28.3	16.7	.7	.0	.0	7.8	10.2
ACHNANTHES LINEARIS	.0	.0	.0	.0	.0	.0	.0	4.4	.6	1.6
ACHNANTHES SPP.	41.7	14.7	4.0	19.6	9.7	6.7	.4	51.1	18.5	18.4
COCCONEIS PEDICULUS	.0	2.9	.0	.0	.0	.0	.0	.0	.4	1.0
COCCONEIS PLACENTULA	.0	.0	.0	.0	1.4	.0	.0	.0	.2	.5
CYCLOTELLA MENEGHENIANA	.0	.0	.0	2.2	2.8	.0	.0	.0	.6	1.2
CYMBELLA MINUTA	.0	.0	2.0	.0	1.4	.0	.4	.0	.5	.8
CYMBELLA MINUTA VAR. SILESIACA	.0	.0	.0	.0	.0	.0	.0	1.1	.1	.4
DIATOMA TENUE VAR. ELONGATUM	.0	.0	.0	.0	.0	.0	.0	2.2	.3	.8
ENTOMONEIS PALLUDOSA	.0	5.9	8.0	.0	4.2	.0	1.1	1.1	2.5	3.1
FRAGILARIA VAUCHERIAE	162.9	156.3	108.0	56.5	145.8	57.8	33.3	123.3	105.5	50.3
GOMPHONEMA ANGUSTATUM	11.4	.0	.0	6.5	1.4	.0	.0	.0	2.4	4.3
GOMPHONEMA OLIVACEUM	56.8	.0	4.0	15.2	5.6	1.5	.0	3.3	10.8	19.2
GOMPHONEMA PARVULUM	.0	.0	4.0	2.2	.0	.0	.0	.0	.8	1.5
GOMPHONEMA TERGESTINUM	.0	.0	.0	13.0	.0	.0	.0	.0	1.6	4.6
NAVICULA ARVENSIS	18.9	8.8	.0	.0	1.4	.7	.4	.0	3.8	6.8
NAVICULA CRYPTOCEPHALA	11.4	32.4	14.0	15.2	5.6	.7	.7	1.1	10.1	10.8
NAVICULA HEUFLERI	3.8	.0	2.0	13.0	.0	.0	.0	.0	2.4	4.5
NAVICULA MUTICA	.0	.0	.0	.0	1.4	.0	.0	.0	.2	.5
NAVICULA PELLICULOSA	68.2	85.5	58.0	232.6	88.9	19.3	14.1	31.1	74.7	69.9
NAVICULA SECRETA VAR. APICULATA	3.8	26.5	4.0	.0	4.2	1.5	2.2	.0	5.3	8.8
NAVICULA TRIPUNCTATA	.0	.0	.0	.0	.0	.0	.0	1.1	.1	.4
NAVICULA VIRIDULA	.0	.0	.0	.0	.0	.0	.4	2.2	.3	.8
NAVICULA SPP.	.0	.0	2.0	.0	.0	.0	1.1	1.1	.5	.8
NITZSCHIA APICULATA	3.8	2.9	2.0	2.2	1.4	.0	1.5	1.1	1.9	1.2
NITZSCHIA DISSIPATA	3.8	2.9	.0	6.5	1.4	.7	.0	2.2	2.2	2.2
NITZSCHIA FONTICOLA	15.2	5.9	20.0	110.9	38.9	1.5	.7	6.7	25.0	36.9
NITZSCHIA FRUSTULUM	22.7	.0	4.0	13.0	36.1	14.8	3.7	22.2	14.6	12.2
NITZSCHIA HOLSATICA	257.6	35.4	12.0	26.1	55.6	9.6	7.0	13.3	52.1	84.6
NITZSCHIA MICROCEPHALA	.0	.0	.0	.0	.0	.0	.0	1.1	.1	.4
NITZSCHIA PALEA	.0	.0	.0	2.2	.0	.0	.0	3.3	.7	1.3
NITZSCHIA SPP.	18.9	11.8	10.0	26.1	.0	4.4	.0	.0	8.9	9.7
PINNULARIA SPP.	.0	.0	2.0	.0	.0	.0	.0	.0	.3	.7
SURIRELLA OVATA	.0	339.2	210.0	82.6	138.9	74.8	8.1	137.8	123.9	111.5
SURIRELLA OVALIS	416.7	.0	.0	6.5	2.8	.7	.0	1.1	53.5	146.8
SYNEDRA AMPHICEPHALA	.0	.0	.0	.0	.0	.0	.7	.0	.1	.3
SYNEDRA FAMELICA	15.2	2.9	.0	.0	.0	.0	.0	.0	2.3	5.3
SYNEDRA INCISA	.0	.0	.0	.0	.0	1.5	.0	.0	.2	.5
SYNEDRA ULNA	.0	.0	.0	.0	.0	.0	.4	.0	.0	.1
UNIDENTIFIED PENNATE DIATOMS	3.8	.0	4.0	6.5	2.8	1.5	.7	4.4	3.0	2.2
DIVISION TOTAL	1136.4	743.4	482.0	687.0	568.1	198.5	77.0	416.7	538.6	
CHLOROPHYTA										
STIGEOCLONIUM SPP.	7.6	11.8	6.0	.0	1.4	.0	.0	4.4	3.9	4.4
DIVISION TOTAL	7.6	11.8	6.0	.0	1.4	.0	.0	4.4	3.9	

CYANOPHYT

EUGL NOPHYT

EU [illegible]

DIVISION TOTAL

TOTAL [illegible]	[illegible]	[illegible]	2.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DIV[illegible]ITY [illegible]	[illegible]	[illegible]	2.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	11[illegible]	[illegible]	[illegible]	[illegible]87.[illegible]	56[illegible].4	198.5	77.[illegible]	421.1	542.[illegible]

SHANNON [illegible]
VARI[illegible]
MAXIMUM [illegible]
EVENN[illegible]
NO [illegible]

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RIOS AQUATIC SURVEYS
SAMPLE DATE: 042579

STATION NUMBER - 27
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	.0	6.0	6.7	6.9					4.9	3.3
ACHNANTHES LINEARIS	.0	.0	.0	1.4					.3	.7
ACHNANTHES MICROCEPHALA	.0	6.0	.0	.0					1.5	3.0
ACHNANTHES SPP.	.0	30.2	126.7	1.4					39.6	59.7
AMPHORA OVALIS	3.5	8.1	.0	4.2					3.9	3.3
AMPHORA PERPUSILLA	.0	16.1	13.3	1.4					7.7	8.2
COCCONEIS PEDICULUS	.0	.0	.0	5.6					1.4	2.8
COCCONEIS PLACENTULA	.0	6.0	2.2	6.9					3.8	3.3
CYMBELLA AFFINIS	14.0	.0	2.2	.0					4.1	6.7
CYMBELLA MINUTA	59.4	10.1	2.2	5.6					19.3	26.9
CYMBELLA SINUATA	.0	2.0	4.4	2.8					2.3	1.8
DIATOMA VULGARE	.0	.0	.0	2.8					.7	1.4
EPITHEMIA SOREX	69.9	304.4	.0	65.3					109.9	133.6
FRAGILARIA VAUCHERIAE	.0	10.1	.0	1.4					2.9	4.9
GOMPHONEMA ANGUSTATUM	3.5	18.1	.0	.0					5.4	8.6
GOMPHONEMA CLEVEI	.0	.0	.0	1.4					.3	.7
GOMPHONEMA OLIVACEUM	632.9	106.9	266.7	161.1					291.9	236.8
GOMPHONEMA PARVULUM	.0	18.1	.0	.0					4.5	9.1
NAVICULA CRYPTOCEPHALA	3.5	.0	2.2	1.4					1.8	1.5
NAVICULA CRYPTOCEPHALA VAR. VENETA	62.9	38.3	22.2	52.8					44.1	17.7
NAVICULA PELLICULOSA	.0	16.1	117.8	4.2					34.5	55.9
NAVICULA TRIPUNCTATA	14.0	16.1	.0	2.9					8.2	8.0
NAVICULA VIRIDULA	17.5	26.2	17.8	113.9					43.8	46.9
NAVICULA SPP.	.0	.0	.0	1.4					.3	.7
NITZSCHIA DISSIPATA	24.5	66.5	4.4	22.2					29.4	26.3
NITZSCHIA FONTICOLA	3.5	44.4	6.7	9.7					16.1	19.0
NITZSCHIA FRUSTULUM	35.0	4.0	6.7	13.9					14.9	14.0
NITZSCHIA HOLSATICA	17.5	20.2	.0	23.6					15.3	10.5
NITZSCHIA IGNORATA	.0	4.0	4.4	1.4					2.5	2.1
NITZSCHIA SPP.	.0	6.0	.0	.0					1.5	3.0
RHOICOSPHENIA CURVATA	38.5	10.1	2.2	26.4					19.3	16.3
SURIRELLA OVATA	.0	.0	.0	5.6					1.4	2.8
UNIDENTIFIED PENNATE DIATOMS	7.0	.0	4.4	6.9					4.6	3.3
DIVISION TOTAL	1007.0	794.4	613.3	554.2					742.2	
CHLOROPHYTA										
CYANOPHYTA										
PHORMIDIUM SPP.	216.8	123.0	4.4	226.4					142.7	103.3
DIVISION TOTAL	216.8	123.0	4.4	226.4					142.7	
EUGLENOPHYTA										
TOTAL DENSITY	1223.8	917.3	617.8	780.6					884.9	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.386
VARIANCE = .0019
MAXIMUM INDEX = 3.584
EVENNESS = .671
NO OF SPECIES = 34

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 42579

STATION NUMBER - 29
NUMBER OF REPITITIONS = 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	6.9	.5	3.7	.0					2.8	3.2
ACHNANTHES SPP.	151.4	.7	137.8	127.4					104.3	69.8
AMPHORA OVALIS	.0	.0	.7	.0					.2	.4
AMPHORA PERPUSILLA	1.4	.0	10.4	.0					2.9	5.0
COCCONEIS PEDICULUS	.0	.2	.0	.0					.1	.1
COCCONEIS PLACENTULA	4.2	3.5	.7	.0					2.1	2.0
CYMBELLA AFFINIS	1.4	.5	.0	.7					.7	.6
CYMBELLA MINUTA	2.8	.5	.7	.0					1.0	1.2
CYMBELLA SINUATA	4.2	.2	3.0	.0					1.8	2.0
EPITHEMIA SOREX	.0	1.5	1.5	.0					.7	.9
FRAGILARIA VAUCHERIAE	9.7	2.0	8.1	.0					5.0	4.7
GOMPHONEMA CLEVEI	.0	1.5	.0	.0					.4	.7
GOMPHONEMA OLIVACEUM	20.8	9.9	13.3	14.8					14.7	4.6
GOMPHONEMA PARVULUM	1.4	.5	.0	.0					.5	.7
NAVICULA CRYPTOCEPHALA	.0	.2	1.5	.0					.4	.7
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	.2	4.4	3.0					1.9	2.2
NAVICULA CUSPIDATA	.0	.2	.0	.0					.1	.1
NAVICULA PELLICULOSA	44.4	.0	63.7	4.4					28.1	31.0
NAVICULA TRIPUNCTATA	2.8	.5	.0	.0					.8	1.3
NAVICULA VIRIDULA	12.5	32.8	5.2	3.0					13.4	13.6
NAVICULA SPP.	.0	.7	.0	.0					.2	.4
NITZSCHIA DISSIPATA	.0	.2	4.4	.7					1.4	2.1
NITZSCHIA FONTICOLA	2.8	.5	4.4	2.2					2.5	1.6
NITZSCHIA FRUSTULUM	1.4	.2	4.4	.0					1.5	2.0
NITZSCHIA HOLSATICA	2.8	.5	.0	.0					.8	1.3
NITZSCHIA PALEA	.0	.2	.0	.0					.1	.1
RHOICOSPHENIA CURVATA	.0	1.	.0	.7					.4	.5
SURIRELLA OVATA	2.8	1.7	.7	.7					1.5	1.
SYNEDRA ULNA	.0	.2	.0	.0					.1	.1
UNIDENTIFIED CENTRIC DIATOMS	.0	.2	.0	.0					.1	.1
UNIDENTIFIED PENNATE DIATOMS	1.4	.5	3.0	.0					1.2	1.3
DIVISION TOTAL	275.0	61.7	271.9	157.8					191.6	
CHLOROPHYTA										
CYANOPHYTA										
PHORMIDIUM SPP.	2.8	.0	.0	.7					.9	1.3
DIVISION TOTAL	2.8	.0	.0	.7					.9	
EUGLENOPHYTA										
TOTAL DENSITY	277.8	61.7	271.9	158.5					192.5	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.773
VARIANCE = .0122
MAXIMUM INDEX = 3.466
EVENNESS = .511
NO OF SPECIES = 32

MAY

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 052379

STATION NUMBER - 13
NUMBER OF REPIITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	1.6	1.3	1.0	.0					1.	.7
ACHNANTHES SPP.	30.4	10.7	5.5	141.2					46.9	63.7
AMPHORA OVALIS	.0	.0	.3	.0					.1	.1
CYMBELLA AMPHICEPHALA	.8	.0	.5	.0					.3	.4
EPITHEMIA SOREX	.8	.0	.0	.0					.2	.4
FRAGILARIA VAUCHERIAE	4.0	.0	.0	.0					1.0	2.0
NANIZSCHIA AMPHIOXYS	1.6	.0	.0	.0					.4	.8
NAVICULA ARVENSIS	.0	.0	.3	.0					.1	.1
NAVICULA CRYPTOCEPHALA VAR. VENETA	2.4	.0	.8	7.8					2.8	3.5
NAVICULA HEUFLERI	.8	.6	.5	2.0					1.	.7
NAVICULA PELLICULOSA	4.0	.0	1.3	2.0					1.8	1.7
NAVICULA SECRETA VAR. APICULATA	.0	.0	.5	.2					.1	.3
NAVICULA VIRIDULA	5.6	1.3	2.1	49.0					14.5	23.1
NITZSCHIA APICULATA	.0	.0	.3	.0					.1	.1
NITZSCHIA DISSIPATA	.8	.0	.0	.0					.2	.4
NITZSCHIA FONTICOLA	.0	.6	.5	5.9					1.8	2.8
NITZSCHIA FRUSTULUM	.8	.0	.5	.0					.3	.4
NITZSCHIA HOLSATICA	2.4	.0	.0	.0					.6	1.2
NITZSCHIA LINEARIS	.8	.0	.0	.0					.2	.4
NITZSCHIA PALEA	.8	.0	.0	.0					.2	.4
NITZSCHIA SPP.	.0	.6	.5	.0					.3	.3
SYNEDRA FAMELICA	3.2	.0	.0	.0					.8	1.6
UNIDENTIFIED PENNATE DIATOMS	1.6	.0	.3	3.9					1.4	1.8
DIVISION TOTAL	62.4	15.2	14.8	211.8					76.0	
CHLOROPHYTA										
CYANOPHYTA										
PHORMIDIUM SPP.	151.2	5.1	13.5	509.8					169.9	236.3
DIVISION TOTAL	151.2	5.1	13.5	509.8					169.9	
EUGLENOPHYTA										
TOTAL DENSITY	213.6	20.2	28.4	721.6					245.9	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.[illegible]
VARIANCE = .[illegible]71
MAXIMUM INDEX = 3.[illegible]8
EVENNESS = .[illegible]4
NO OF SPECIES = [illegible]4

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 052479

STATION NUMBER - 14
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	77.8	98.2	42.6	12.6					57.8	37.9
ACHNANTHES SPP.	1188.9	1223.2	1212.8	391.4					1004.1	408.7
BICOECA LACUSTRIS	.0	.0	10.6	.0					2.7	5.3
CYCLOTELLA MENEGHENIANA	11.1	.0	10.6	.0					5.4	6.3
CYMBELLA AFFINIS	.0	.0	.0	3.2					.8	1.6
FRAGILARIA VAUCHERIAE	11.1	26.8	.0	.0					9.5	12.7
GOMPHONEMA ANGUSTATUM	.0	.0	.0	3.2					.8	1.6
NAVICULA ARVENSIS	44.4	26.8	106.4	126.3					76.0	47.8
NAVICULA CRYPTOCEPHALA VAR. VENETA	22.2	.0	.0	3.2					6.3	10.7
NAVICULA PELLICULOSA	.0	8.9	21.3	.0					7.6	10.1
NAVICULA SECRETA VAR. APICULATA	55.6	98.2	74.5	6.3					58.6	39.0
NAVICULA VIRIDULA	11.1	.0	.0	.0					2.8	5.6
NITZSCHIA DENTICULA	22.2	35.7	.0	9.5					16.9	15.5
NITZSCHIA FONTICOLA	.0	26.8	10.6	12.6					12.5	11.0
NITZSCHIA FRUSTULUM	.0	17.9	.0	6.3					6.0	8.4
NITZSCHIA HOLSATICA	.0	.0	10.6	6.3					4.2	5.2
NITZSCHIA LINEARIS	.0	8.9	.0	.0					2.2	4.5
NITZSCHIA MICROCEPHALA	.0	.0	.0	3.2					.8	1.6
SURIRELLA OVATA	11.1	.0	.0	.0					2.8	5.6
SYNEDRA FAMELICA	.0	8.9	.0	9.5					4.6	5.3
SYNEDRA FASCICULATA	22.2	.0	53.2	15.8					22.8	22.3
SYNEDRA ULNA	11.1	.0	.0	.0					2.8	5.6
UNIDENTIFIED PENNATE DIATOMS	11.1	26.8	31.9	.0					17.5	14.6
DIVISION TOTAL	1500.0	1607.1	1585.1	609.2					1325.4	
CHLOROPHYTA										
CYANOPHYTA										
PHORMIDIUM SPP.	211.1	44.6	.0	3.2					64.7	99.7
DIVISION TOTAL	211.1	44.6	.0	3.2					64.7	
EUGLENOPHYTA										
TOTAL DENSITY	1711.1	1651.8	1585.1	612.4					1390.1	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.262
VARIANCE = .018
MAXIMUM INDEX = 3.178
EVENNESS = .397
NO OF SPECIES = 24

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RROSC AQUATIC SURVEYS
SAMPLE DATE: 052379

STATION NUMBER - 20
NUMBER OF REPITITIONS - 8

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	2.2	.0	.5	.0	.0	.0	.0	.0	.3	.8
ACHNANTHES SPP.	156.7	42.8	4.8	40.7	20.8	9.8	.0	27.8	37.9	50.5
CYCLOTELLA MENEGHENIANA	.0	1.3	.0	.0	.0	.0	.0	.0	.2	.5
CYMBELLA AFFINIS	.0	.0	.0	.0	.0	.0	5.7	.0	.7	2.0
CYMBELLA MINUTA VAR. SILESIACA	.0	2.6	.0	.0	.0	.0	.0	.0	.3	.9
ENTOMONEIS PALLUDOSA	2.2	1.3	.5	2.0	.0	.0	.0	.0	.8	1.
FRAGILARIA VAUCHERIAE	4.4	16.9	5.8	4.1	.0	7.9	.0	41.7	10.1	13.8
GOMPHONEMA ANGUSTATUM	2.2	1.3	.0	.0	.0	3.0	.0	.0	.8	1.2
GOMPHONEMA OLIVACEUM	.0	.0	.0	2.0	.0	.0	.0	.0	.3	.7
NAVICULA ARVENSIS	6.6	.0	.0	.0	.0	.0	5.7	.0	1.5	2.9
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	.0	.0	2.0	3.5	2.0	.0	4.6	1.5	1.8
NAVICULA CUSPIDATA	.0	.0	.5	.0	.0	.0	.0	.0	.1	.2
NAVICULA HEUFLERI	.0	.0	.0	.0	3.5	1.	.0	.0	.6	1.2
NAVICULA PELLICULOSA	225.2	51.9	54.5	211.4	347.2	76.8	566.9	398.1	241.5	185.5
NAVICULA SECRETA VAR. APICULATA	2.2	.0	2.6	2.0	3.5	2.0	.0	13.9	3.3	4.5
NAVICULA VIRIDULA	.0	.0	.0	2.0	.0	.0	.0	.0	.3	.7
NITZSCHIA APICULATA	.0	.0	1.1	.0	.0	.0	.0	4.6	.7	1.6
NITZSCHIA DISSIPATA	.0	.0	.0	.0	3.5	1.	.0	.0	.6	1.2
NITZSCHIA FONTICOLA	183.2	149.2	32.3	166.7	131.9	104.3	96.4	476.9	167.6	133.6
NITZSCHIA FRUSTULUM	13.2	18.2	.0	4.1	38.2	66.9	45.4	41.7	28.5	23.2
NITZSCHIA HOLSATICA	6.6	1.3	1.6	6.1	24.3	9.8	28.3	37.0	14.4	13.6
NITZSCHIA LATENS	2.2	.0	.5	.0	3.5	1.	.0	9.3	2.1	3.2
NITZSCHIA MICROCEPHALA	4.4	1.3	.0	.0	.0	.0	.0	.0	.7	1.6
NITZSCHIA PALEA	.0	.0	.5	.0	.0	.0	.0	.0	.1	.2
NITZSCHIA SPP.	.0	.0	2.1	4.1	.0	.0	.0	13.9	2.5	4.8
PINNULARIA BREBISSONII	.0	1.3	.0	.0	.0	.0	.0	.0	.2	.5
SURIRELLA OVATA	11.0	10.4	11.1	.0	10.4	6.9	5.7	4.6	7.5	4.0
SURIRELLA OVALIS	.0	.0	.5	.0	.0	.0	.0	.0	.1	.2
SYNEDRA FAMELICA	4.4	2.6	.0	.0	.0	1.	.0	.0	1.	1.7
SYNEDRA FASCICULATA	.0	.0	.0	.0	3.5	.0	.0	.0	.4	1.2
UNIDENTIFIED PENNATE DIATOMS	2.2	.0	1.6	4.1	.0	.0	.0	.0	1.	1.5
DIVISION TOTAL	629.1	302.2	120.6	451.2	593.7	293.3	754.0	1074.1	527.3	
CHLOROPHYTA										
CYANOPHYTA										
PHORMIDIUM SPP.	2.2	1.3	.0	.0	.0	3.0	.0	.0	.8	1.2
DIVISION TOTAL	2.2	1.3	.0	.0	.0	3.0	.0	.0	.8	
EUGLENOPHYTA										
TOTAL DENSITY	631.3	303.5	120.6	451.2	593.7	296.3	754.0	1074.1	528.1	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.540
VARIANCE = .0031
MAXIMUM INDEX = 3.466
EVENNESS = .444
NO OF SPECIES = 32

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 052379

STATION NUMBER - 21
NUMBER OF REPITITIONS - 8

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES SPP.	7.5	21.6	6.9	.0	51.5	12.5	4.3	8.1	14.1	16.4
AMPHORA OVALIS	.6	.0	.0	.0	.0	.0	.0	.0	.1	.2
CYCLOTELLA MENEGHENIANA	.0	.0	.0	.0	4.3	.0	2.2	2.0	1.1	1.6
CYMBELLA MINUTA VAR. SILESIACA	.0	.0	.0	.0	.0	.0	.0	1.0	.1	.4
ENTOMONEIS PALLUDOSA	1.7	.0	.0	.0	4.3	.0	.0	.0	.8	1.6
FRAGILARIA VAUCHERIAE	16.7	27.0	3.5	2.5	17.2	1.6	8.7	3.0	10.0	9.3
GOMPHONEMA ANGUSTATUM	1.7	.0	.0	.0	.0	.0	.0	.0	.2	.6
GOMPHONEMA OLIVACEUM	.0	.0	.0	.0	4.3	.0	2.2	.0	.8	1.6
NAVICULA ARVENSIS	3.5	.0	.0	.0	.0	.0	.0	1.0	.6	1.2
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	.0	3.5	.0	8.6	.0	.0	1.0	1.6	3.1
NAVICULA HEUFLERI	.6	.0	.0	.0	.0	.0	.0	.0	.1	.2
NAVICULA PELLICULOSA	37.5	273.0	375.0	25.7	433.8	160.4	204.3	116.5	203.3	149.2
NAVICULA SECRETA VAR. APICULATA	1.7	5.4	.0	1.2	.0	4.7	2.2	3.0	2.3	2.0
NAVICULA TRIPUNCTATA	.6	.0	.0	.0	.0	.0	.0	.0	.1	.2
NITZSCHIA FONTICOLA	57.7	89.2	135.4	34.3	107.4	48.3	219.6	101.3	99.1	59.2
NITZSCHIA FRUSTULUM	2.9	18.9	17.4	4.9	55.8	7.8	15.2	.0	15.4	17.8
NITZSCHIA HOLSATICA	4.0	8.1	10.4	1.8	21.5	9.3	13.0	1.0	8.7	6.7
NITZSCHIA LATENS	.0	.0	.0	.0	12.9	.0	2.2	.0	1.9	4.5
NITZSCHIA MICROCEPHALA	.0	.0	.0	.0	21.5	.0	2.2	4.1	3.5	7.4
NITZSCHIA TRYBLIONELLA VAR. LEVIDENS	.0	.0	.0	.0	.0	.0	.0	1.0	.1	.4
NITZSCHIA SPP.	.6	.0	3.5	.6	.0	.0	.0	2.0	.8	1.3
RHOICOSPHENIA CURVATA	.0	.0	.0	.0	.0	.0	.0	1.0	.1	.4
SURIRELLA OVATA	1.7	5.4	.0	.0	12.9	6.2	.0	10.1	4.5	5.0
SYNEDRA FAMELICA	1.7	.0	.0	.0	.0	1.6	2.2	.0	.7	1.
UNIDENTIFIED PENNATE DIATOMS	.0	5.4	3.5	.0	.0	1.6	.0	2.0	1.6	2.0
DIVISION TOTAL	140.7	454.1	559.0	71.1	756.0	253.9	478.3	258.4	371.4	
CHLOROPHYTA										
CYANOPHYTA										
PHORMIDIUM SPP.	1.2	8.1	.0	3.1	8.6	.0	.0	1.0	2.7	3.6
DIVISION TOTAL	1.2	8.1	.0	3.1	8.6	.0	.0	1.0	2.7	
EUGLENOPHYTA										
PHACUS SPP.	.0	.0	17.4	.0	.0	.0	.0	1.0	2.3	6.1
DIVISION TOTAL	.0	.0	17.4	.0	.0	.0	.0	1.0	2.3	
TOTAL DENSITY	141.9	462.2	576.4	74.1	764.6	253.9	478.3	260.4	376.5	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.482
VARIANCE = .0251
MAXIMUM INDEX = 3.296
EVENNESS = .450
NO OF SPECIES = 27

JUNE

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 062179

STATION NUMBER - 13
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	.0	.0	.0	5.8					1.4	2.9
ACHNANTHES SPP.	20.1	684.3	54.3	127.3					221.5	311.7
FRAGILARIA VAUCHERIAE	.0	20.3	8.2	179.4					52.0	85.4
GOMPHONEMA ANGUSTATUM	.0	6.8	.0	.0					1.7	3.4
NAVICULA ARVENSIS	.3	6.8	1.0	11.6					4.9	5.3
NAVICULA CRYPTOCEPHALA VAR. VENETA	.3	.0	.0	75.2					18.9	37.6
NAVICULA HEUFLERI	.3	.0	.0	63.7					16.0	31.8
NAVICULA PELLICULOSA	.3	47.4	16.4	46.3					27.6	23.2
NAVICULA SECRETA VAR. APICULATA	.0	.0	1.0	46.3					11.8	23.0
NAVICULA VIRIDULA	.0	.0	1.0	11.6					3.1	5.6
NAVICULA SPP.	1.0	.0	.0	5.8					1.7	2.8
NITZSCHIA FONTICOLA	.5	27.1	3.1	578.7					152.3	284.5
NITZSCHIA FRUSTULUM	1.5	54.2	.0	5.8					15.4	26.0
NITZSCHIA HOLSATICA	.0	.0	.0	52.1					13.0	26.0
NITZSCHIA LINEARIS	.0	.0	.0	5.8					1.4	2.9
NITZSCHIA SPP.	.0	13.6	.0	23.1					9.2	11.3
SURIRELLA OVATA	.0	.0	.0	52.1					13.0	26.0
SYNEDRA FAMELICA	.0	.0	1.0	11.6					3.1	5.6
UNIDENTIFIED PENNATE DIATOMS	.3	6.8	2.1	.0					2.3	3.1
DIVISION TOTAL	24.5	867.2	88.2	1302.1					570.5	
CHLOROPHYTA										
CYANOPHYTA										
LYNGBYA SPP.	.5	33.9	5.1	.0					9.9	16.2
OSCILLATORIA PSEUDOGEMINATA	.3	.0	.0	.0					.1	.1
OSCILLATORIA SPP.	.3	.0	.0	.0					.1	.1
PHORMIDIUM SPP.	56.2	1165.3	320.8	219.9					440.6	495.3
DIVISION TOTAL	57.2	1199.2	326.0	219.9					450.6	
EUGLENOPHYTA										
TOTAL DENSITY	81.7	2066.4	414.1	1522.0					1021.1	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.795
VARIANCE = .0015
MAXIMUM INDEX = 3.1[illegible]
EVENNESS = .57[illegible]
NO OF SPECIES = [illegible]

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 062179

STATION NUMBER - 14
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	131.1	184.3	71.2	131.0					129.4	46.2
ACHNANTHES SPP.	1282.1	1679.0	712.3	1686.3					1339.9	459.1
AMPHORA OVALIS	.0	20.5	7.1	16.4					11.0	9.2
CYCLOTELLA MENEGHENIANA	87.4	102.4	35.6	32.7					64.5	35.6
CYMBELLA AFFINIS	29.1	20.5	28.5	.0					19.5	13.6
CYMBELLA CISTULA	.0	.0	.0	49.1					12.3	24.6
CYMBELLA CYMBIFORMIS	14.6	.0	.0	.0					3.6	7.3
CYMBELLA MINUTA	14.6	81.9	7.1	16.4					30.0	34.8
CYMBELLA MINUTA VAR. SILESIACA	.0	.0	14.2	.0					3.6	7.1
DIATOMA VULGARE VAR. GRANDE	888.7	675.7	49.9	16.4					407.6	441.3
FRAGELARIA CAPUCINA	72.8	41.0	.0	.0					28.4	35.3
FRAGILARIA SPP.	218.5	.0	.0	.0					54.6	109.3
FRAGILARIA VAUCHERIAE	72.8	163.8	57.0	262.0					138.9	94.6
GOMPHONEMA ANGUSTATUM	29.1	.0	7.1	.0					9.1	13.8
GOMPHONEMA PARVULUM	14.6	.0	14.2	.0					7.2	8.3
GOMPHONEMA SUBCLAVATUM VAR. MEXICANU	29.1	.0	.0	.0					7.3	14.6
GOMPHONEMA SPP.	43.7	41.0	14.2	32.7					32.9	13.3
MERIDION CIRCULARE	14.6	20.5	.0	.0					8.8	10.4
NAVICULA ARVENSIS	.0	.0	7.1	16.4					5.9	7.8
NAVICULA CRYPTOCEPHALA	.0	20.5	.0	.0					5.1	10.2
NAVICULA CRYPTOCEPHALA VAR. VENETA	131.1	81.9	57.0	16.4					71.6	48.0
NAVICULA CUSPIDATA	14.6	.0	.0	.0					3.6	7.3
NAVICULA HEUFLERI	29.1	.0	85.5	32.7					36.8	35.6
NAVICULA PYGMAEA	.0	.0	.0	16.4					4.1	8.2
NAVICULA SECRETA VAR. APICULATA	276.8	614.3	270.7	131.0					323.2	205.4
NAVICULA SPP.	.0	.0	7.1	32.7					10.0	15.6
NITZSCHIA ACICULARIS	.0	81.9	7.1	16.4					26.3	37.6
NITZSCHIA ACUTA	.0	.0	7.1	.0					1.8	3.6
NITZSCHIA DENTICULA	407.9	450.5	85.5	262.0					301.4	165.1
NITZSCHIA FONTICOLA	58.3	61.4	185.2	49.1					88.5	64.7
NITZSCHIA FRUSTULUM	14.6	.0	49.9	32.7					24.3	21.7
NITZSCHIA HOLSATICA	29.1	61.4	35.6	16.4					35.6	19.0
NITZSCHIA LINEARIS	58.3	81.9	35.6	.0					43.9	34.9
NITZSCHIA PALEA	.0	20.5	.0	.0					5.1	10.2
NITZSCHIA SPP.	14.6	41.0	7.1	.0					15.7	17.9
PINNULARIA BREBISSONII	.0	.0	.0	16.4					4.1	8.2
RHOPALODIA GIBBA	.0	20.5	.0	.0					5.1	10.2
SURIRELLA OVATA	14.6	.0	.0	16.4					7.7	9.0
SYNEDRA FAMELICA	1384.0	2190.8	413.1	802.2					1197.5	773.1
SYNEDRA FASCICULATA	1515.2	1392.3	121.1	278.3					826.7	728.6
SYNEDRA ULNA	14.6	61.4	7.1	.0					20.8	27.7
THALASSIOSIRA FLUVIATILIS	14.6	.0	14.2	32.7					15.4	13.4
UNIDENTIFIED PENNATE DIATOMS	58.3	102.4	71.2	16.4					62.1	35.6
DIVISION TOTAL	6978.4	8312.9	2485.8	4027.5					5451.1	

CHLOROPHYTA

MOUGEOTIA SP.
ULOTHRIX SP.

DIVISION TOTAL

	.2	2.5	.2	.0	5.1	10.2
	.2	2.5	14.2	16.4	12.8	8.9
CYANOPHYTA	---	---	---	---	---	
	.2	41.3	14.2	16.4	17.9	

EUGLENOPHYTA

TOTAL # OF TAXA

DIVERSITY INDEX CALCULATION

	8978.4	8353.8	2516.3	4543.9	5469.0

SHANNON INDEX =
VARIANCE =
MAXIMUM INDEX =
EVENNESS =
NO. OF TAXA =

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RHOSS AQUATIC SURVEYS
SAMPLE DATE: 062079

STATION NUMBER - 2C
NUMBER OF REPITITIONS - 8

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	.0	3.6	.0	.0	.0	.0	.0	.0	.4	1.3
ACHNANTHES SPP.	52.7	33.8	46.8	70.4	1133.3	69.4	6.2	4.2	177.1	387.2
CYCLOTELLA MENEGHENIANA	3.5	35.6	8.8	11.1	33.3	25.3	64.0	5.3	23.4	20.7
CYMBELLA MINUTA VAR. SILESIACA	.0	5.3	2.9	.0	.0	.0	.0	1.0	1.0	2.0
FRAGILARIA VAUCHERIAE	21.1	51.6	11.7	25.9	11.1	.0	3.1	1.1	15.7	17.2
GOMPHONEMA OLIVACEUM	.0	1.8	.0	.0	.0	.0	.0	.0	.2	.6
GOMPHONEMA SPP.	3.5	.0	.0	.0	11.1	.0	.0	.0	1.8	3.9
NAVICULA ARVENSIS	3.5	5.3	.0	.0	22.2	.0	.0	.0	3.9	7.7
NAVICULA CRYPTOCEPHALA	.0	.0	8.8	22.2	11.1	6.3	.0	1.1	6.2	7.8
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	3.6	.0	3.7	11.1	.0	3.1	.0	2.7	3.8
NAVICULA HALOPHILA	3.5	.0	.0	.0	.0	.0	.0	.0	.4	1.2
NAVICULA HEUFLERI	.0	.0	8.8	3.7	.0	.0	.0	.0	1.6	3.2
NAVICULA PELLICULOSA	35.2	1.8	105.3	125.9	22.2	63.1	3.1	10.6	45.9	47.7
NAVICULA SECRETA VAR. APICULATA	.0	3.6	.0	.0	.0	.0	1.6	.5	.7	1.3
NAVICULA TRIPUNCTATA	.0	.0	2.9	.0	.0	.0	.0	.0	.4	1.0
NAVICULA VIRIDULA	.0	.0	.0	3.7	.0	.0	1.6	.5	.7	1.3
NAVICULA SPP.	3.5	.0	.0	.0	.0	.0	.0	.0	.4	1.2
NITZSCHIA DISSIPATA	.0	1.8	.0	.0	.0	.0	1.6	.5	.5	.8
NITZSCHIA FONTICOLA	351.6	179.7	298.2	370.4	900.0	656.6	156.1	53.1	370.7	280.5
NITZSCHIA FRUSTULUM	3.5	5.3	8.8	3.7	22.2	6.3	1.6	.5	6.5	6.9
NITZSCHIA HOLSATICA	21.1	5.3	.0	.0	22.2	12.6	1.6	.5	7.9	9.5
NITZSCHIA LATENS	3.5	5.3	23.4	25.9	33.3	6.3	.0	2.1	12.5	12.9
NITZSCHIA LINEARIS	.0	1.8	.0	.0	.0	.0	.0	.0	.2	.6
NITZSCHIA MICROCEPHALA	14.1	7.1	8.8	3.7	11.1	.0	.0	2.7	5.9	5.2
NITZSCHIA PALEA	.0	1.8	.0	.0	11.1	.0	.0	.0	1.6	3.9
NITZSCHIA SPP.	7.0	3.6	8.8	22.2	11.1	.0	.0	1.1	6.7	7.5
SURIRELLA OVATA	.0	7.1	2.9	.0	11.1	.0	.0	.5	2.7	4.2
SYNEDRA PULCHELLA	.0	.0	.0	.0	.0	.0	3.1	.0	.4	1.1
SYNEDRA SPP.	.0	.0	.0	.0	.0	.0	.0	.5	.1	.2
UNIDENTIFIED PENNATE DIATOMS	.0	3.6	2.9	3.7	.0	.0	1.6	.0	1.5	1.7
DIVISION TOTAL	527.4	368.3	549.7	696.3	2277.8	846.0	248.1	85.0	699.8	
CHLOROPHYTA										
CYANOPHYTA										
PHORMIDIUM SPP.	42.2	49.8	.0	.0	.0	63.1	35.9	1.6	24.1	26.5
DIVISION TOTAL	42.2	49.8	.0	.0	.0	63.1	35.9	1.6	24.1	
EUGLENOPHYTA										
TOTAL DENSITY	569.6	418.1	549.7	696.3	2277.8	909.1	284.0	86.6	723.9	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.634
VARIANCE = .0028
MAXIMUM INDEX = 3.434
EVENNESS = .476
NO OF SPECIES = 31

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 082 79

STATION NUMBER - 21
NUMBER OF REPITITIONS - 8

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	.0	.0	.0	.0	.0	.0	.9	.0	.1	.3
ACHNANTHES SPP.	8.9	7.0	10.2	8.6	111.1	16.7	1.9	10.6	21.9	36.3
CYCLOTELLA MENEGHENIANA	28.1	31.6	20.3	20.1	33.3	24.1	17.8	14.1	23.7	6.8
CYMBELLA MINUTA	.0	3.5	.0	.0	.0	.0	.0	.0	.4	1.2
ENTOMONEIS PALLUDOSA	.0	.0	.0	1.	.0	.0	.0	.0	.1	.3
FRAGILARIA VAUCHERIAE	.0	21.1	3.4	16.3	7.4	5.6	.0	10.6	8.0	7.6
GOMPHONEMA OLIVACEUM	.0	.0	.0	.0	7.4	.0	.0	.0	.9	2.6
GOMPHONEMA SPP.	.0	.0	.0	1.	.0	.0	.0	.0	.1	.3
NAVICULA CRYPTOCEPHALA	.0	.0	.0	1.	.0	1.9	.0	.0	.4	.7
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	10.5	.0	1.9	18.5	1.9	1.9	.0	4.3	6.7
NAVICULA PELLICULOSA	1.5	10.5	6.8	6.7	88.9	11.1	12.2	7.0	18.1	28.8
NAVICULA SECRETA VAR. APICULATA	.0	3.5	.0	.0	3.7	1.9	.0	.0	1.1	1.7
NAVICULA VIRIDULA	.0	.0	.0	.0	.0	5.6	.9	.0	.8	1.9
NAVICULA SPP.	.0	.0	.0	.0	.0	.0	.9	.0	.1	.3
NITZSCHIA DENTICULA	.0	.0	.0	.0	.0	.0	.0	1.8	.2	.6
NITZSCHIA FONTICOLA	150.7	372.7	342.1	95.8	374.1	188.9	94.5	177.8	224.6	119.9
NITZSCHIA FRUSTULUM	1.5	10.5	.0	3.8	25.9	.0	.0	.0	5.2	9.1
NITZSCHIA HOLSATICA	.0	3.5	.0	.0	.0	.0	.0	.0	.4	1.2
NITZSCHIA LATENS	.0	10.5	.0	1.	.0	3.7	1.9	.0	2.1	3.6
NITZSCHIA LINEARIS	1.5	.0	.0	.0	.0	.0	.0	.0	.2	.5
NITZSCHIA MICROCEPHALA	.0	14.1	.0	1.	11.1	.0	1.9	.0	3.5	5.7
NITZSCHIA PALEA	1.5	.0	.0	.0	.0	.0	.0	.0	.2	.5
NITZSCHIA TRYBLIONELLA VAR. LEVIDENS	1.5	.0	.0	.0	.0	.0	.0	.0	.2	.5
NITZSCHIA SPP.	1.5	3.5	.0	4.8	.0	.0	.0	1.8	1.4	1.8
NITZSCHIA SP. #1	.0	.0	.0	.0	29.6	.0	.0	.0	3.7	10.5
SURIRELLA OVATA	.0	10.5	.0	1.	.0	.0	.0	.0	1.4	3.7
SURIRELLA OVALIS	.0	.0	.0	1.	.0	.0	.0	1.8	.3	.7
SYNEDRA FAMELICA	.0	.0	.0	.0	.0	1.9	.0	.0	.2	.7
SYNEDRA PULCHELLA	.0	.0	.0	1.9	.0	.0	.0	.0	.2	.7
SYNEDRA RADIANS	.0	.0	.0	1.	.0	.0	.0	.0	.1	.3
UNIDENTIFIED PENNATE DIATOMS	.0	3.5	.0	3.8	11.1	1.9	.0	.0	2.5	3.8
DIVISION TOTAL	196.5	516.9	382.8	171.5	722.2	264.8	134.7	225.4	326.8	
CHLOROPHYTA										
BULBOCHAETAE SPP.	.0	.0	.0	.0	.0	.0	2.8	24.6	3.4	8.6
DIVISION TOTAL	.0	.0	.0	.0	.0	.0	2.8	24.6	3.4	
CYANOPHYTA										
DACTYLOCOCCOPSIS SPP.	.0	.0	.0	.0	.0	.0	.0	311.6	39.0	110.2
PHORMIDIUM SPP.	1.5	3.5	16.9	1.	3.7	5.6	1.9	5.3	4.9	5.1
DIVISION TOTAL	1.5	3.5	16.9	1.	3.7	5.6	1.9	316.9	43.9	
EUGLENOPHYTA										
TOTAL DENSITY	198.0	520.4	399.7	172.4	725.9	270.4	139.4	566.9	374.1	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.63
VARIANCE = .0464
MAXIMUM INDEX = 3.526
EVENNESS = .462
NO OF SPECIES = 34

JULY

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
ROOSC AQUATIC SURVEYS
SAMPLE DATE: 71979

STATION NUMBER - 13
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	.3	.0	.0	.0					.1	.2
ACHNANTHES SPP.	32.7	22473.8	334.0	425.1					5816.4	11196.2
CYMBELLA CYMBIFORMIS	.0	54.7	.0	.0					13.7	27.3
FRAGILARIA VAUCHERIAE	4.5	765.5	23.1	16.8					202.5	375.4
GOMPHONEMA ANGUSTATUM	.0	109.4	.0	.0					27.3	54.7
GOMPHONEMA PARVULUM	.0	.0	3.3	4.2					1.9	2.2
NAVICULA ARVENSIS	.6	.0	13.2	.0					3.5	6.5
NAVICULA PELLICULOSA	3.2	.0	23.1	4.2					7.6	10.5
NAVICULA SECRETA VAR. APICULATA	.6	.0	.0	.0					.2	.3
NITZSCHIA SPP.	.3	.0	.0	.0					.1	.2
UNIDENTIFIED PENNATE DIATOMS	.3	.0	.0	4.2					1.1	2.1
DIVISION TOTAL	42.6	23403.3	396.8	454.5					6074.3	
CHLOROPHYTA										
STIGEOCLONIUM SPP.	.3	.0	.0	.0					.1	.2
DIVISION TOTAL	.3	.0	.0	.0					.1	
CYANOPHYTA										
PHORMIDIUM SPP.	.3	.0	.0	.0					.1	.2
DIVISION TOTAL	.3	.0	.0	.0					.1	
EUGLENOPHYTA										
TOTAL DENSITY	43.2	23403.3	396.8	454.5					6074.5	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = .211
VARIANCE = .0001
MAXIMUM INDEX = 2.565
EVENNESS = .082
NO OF SPECIES = 13

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 071979

STATION NUMBER - 14
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	48.2	74.7	87.1	241.8					113.0	87.4
ACHNANTHES SPP.	964.5	747.4	1089.3	718.6					880.0	177.6
AMPHORA OVALIS	.0	.0	10.9	6.9					4.5	5.4
CALONEIS AMPHISBAENA	.0	.0	10.9	.0					2.7	5.4
CYCLOTELLA MENEGHENIANA	.0	7.5	21.8	13.8					10.8	9.3
CYMBELLA AFFINIS	.0	.0	.0	6.9					1.7	3.5
CYMBELLA CYMBIFORMIS	.0	.0	10.9	6.9					4.5	5.4
CYMBELLA MINUTA	19.3	.0	43.6	69.1					33.0	30.0
CYMBELLA MINUTA VAR. SILESIACA	.0	7.5	.0	.0					1.9	3.7
DIATOMA VULGARE VAR. GRANDE	.0	.0	.0	6.9					1.7	3.5
FRAGELARIA CAPUCINA	.0	.0	.0	48.4					12.1	24.2
FRAGILARIA PINNATA	.0	.0	10.9	13.8					6.2	7.2
FRAGILARIA VAUCHERIAE	19.3	7.5	65.4	34.5					31.7	25.0
GOMPHONEMA ANGUSTATUM	9.6	7.5	21.8	13.8					13.2	6.3
GOMPHONEMA PARVULUM	.0	7.5	.0	6.9					3.6	4.2
GOMPHONEMA SPP.	.0	7.5	.0	.0					1.9	3.7
NAVICULA CRYPTOCEPHALA VAR. VENETA	19.3	14.9	32.7	89.8					39.2	34.6
NAVICULA HEUFLERI	.0	7.5	.0	6.9					3.6	4.2
NAVICULA PELLICULOSA	.0	14.9	21.8	13.8					12.6	9.1
NAVICULA SECRETA VAR. APICULATA	96.5	216.7	272.3	532.1					279.4	183.7
NAVICULA VIRIDULA	.0	.0	10.9	13.8					6.2	7.2
NITZSCHIA ACICULARIS	.0	.0	.0	20.7					5.2	10.4
NITZSCHIA DENTICULA	9.6	22.4	65.4	89.8					46.8	37.3
NITZSCHIA DISSIPATA	.0	.0	10.9	6.9					4.5	5.4
NITZSCHIA FONTICOLA	48.2	22.4	32.7	89.8					48.3	29.7
NITZSCHIA FRUSTULUM	.0	14.9	.0	.0					3.7	7.5
NITZSCHIA HOLSATICA	.0	14.9	.0	13.8					7.2	8.3
NITZSCHIA LINEARIS	.0	.0	21.8	6.9					7.2	10.3
NITZSCHIA PALEA	.0	.0	.0	6.9					1.7	3.5
NITZSCHIA SPP.	.0	.0	.0	13.8					3.5	6.9
PINNULARIA BREBISSONII	.0	.0	.0	6.9					1.7	3.5
SURIRELLA OVATA	.0	.0	32.7	55.3					22.0	27.0
SYNEDRA DELICATISSIMA	.0	.0	.0	6.9					1.7	3.5
SYNEDRA FAMELICA	106.1	134.5	359.5	428.4					257.1	160.9
SYNEDRA FASCICULATA	28.9	37.4	152.5	124.4					85.8	62.0
SYNEDRA ULNA	.0	.0	21.8	41.5					15.8	19.9
UNIDENTIFIED PENNATE DIATOMS	48.2	22.4	43.6	62.2					44.1	16.5
DIVISION TOTAL	1417.8	1390.1	2451.0	2819.2					2019.5	
CHLOROPHYTA										
MOUGEOTIA SPP.	.0	7.5	.0	.0					1.9	3.7
DIVISION TOTAL	.0	7.5	.0	.0					1.9	
CYANOPHYTA										
EUGLENOPHYTA										
TOTAL DENSITY	1417.8	1397.6	2451.0	2819.2					2021.4	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.117
VARIANCE = .0011
MAXIMUM INDEX = 3.638
EVENNESS = .579
NO OF SPECIES = 38

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
R8OSC AQUATIC SURVEYS
SAMPLE DATE: 71879

STATION NUMBER - 20
NUMBER OF REPITITIONS - 8

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES SPP.	1.1	.6	.0	.0	.0	.0	2.0	3.1	.8	1.2
CYCLOTELLA MENEGHENIANA	3.1	3.2	71.7	3.6	1.1	.3	15.9	17.0	14.5	24.0
CYMBELLA MINUTA VAR. SILESIACA	.0	.0	.0	.0	.0	.0	2.0	.0	.2	.7
DIATOMA TENUE VAR. ELONGATUM	.0	.0	.0	.0	.0	.0	2.0	.0	.2	.7
EPITHEMIA SOREX	.0	.2	.0	.0	.0	.0	.0	.0	.0	.1
FRAGILARIA VAUCHERIAE	.5	1.1	.0	.0	.0	.0	4.0	.0	.7	1.4
GOMPHONEMA ANGUSTATUM	.0	.0	.0	.0	.5	.0	.0	.0	.1	.2
GYROSIGMA SPENCERII	.0	.0	.0	.0	.3	.0	.0	.0	.0	.1
MASTOGLOIA ELLIPTICA	.2	.0	13.0	.0	.0	.0	4.0	3.1	2.5	4.5
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	.0	2.2	.0	.0	.0	.0	.0	.3	.8
NAVICULA PELLICULOSA	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0
NAVICULA SECRETA VAR. APICULATA	.4	.2	.0	.0	.3	.0	.0	.0	.1	.2
NAVICULA TRIPUNCTATA	.0	.0	.0	.2	.0	.1	4.0	1.5	.7	1.4
NAVICULA VIRIDULA	.0	.2	.0	.0	.0	.1	.0	.0	.0	.1
NITZSCHIA APICULATA	.0	.0	.0	.2	.3	.0	.0	.0	.1	.1
NITZSCHIA DENTICULA	.5	.0	.0	.0	.0	.0	.0	.0	.1	.2
NITZSCHIA FONTICOLA	2.0	2.1	32.6	.5	.5	.2	101.6	40.1	22.4	35.8
NITZSCHIA HOLSATICA	.0	.4	4.3	.0	.0	.0	4.0	3.1	1.5	2.0
NITZSCHIA MICROCEPHALA	.0	.0	.0	.0	.0	.0	8.0	.0	1.	2.8
NITZSCHIA PALEA	.0	.2	.0	.0	.0	.0	.0	.0	.0	.1
NITZSCHIA SPP.	.0	1.3	2.2	.2	.0	.0	.0	.0	.5	.8
RHOPALODIA GIBBERULA	.0	.2	8.7	.2	.0	.0	.0	.0	1.1	3.1
SURIRELLA OVATA	.0	.0	.0	.2	.0	.0	2.0	.0	.3	.7
SURIRELLA OVALIS	.0	.0	.0	.0	.3	.0	2.0	.0	.3	.7
SYNEDRA FAMELICA	.0	.0	.0	.0	.0	.0	2.0	.0	.2	.7
SYNEDRA FASCICULATA	.0	.0	.0	.5	.0	.0	.0	.0	.1	.2
SYNEDRA PULCHELLA	.0	.6	6.5	.0	.3	.0	19.9	4.6	4.0	6.9
SYNEDRA SPP.	.0	.0	.0	.0	.5	.0	.0	.0	.1	.2
SYNEDRA ULNA	.2	.0	.0	.0	.0	.0	.0	.0	.0	.1
UNIDENTIFIED PENNATE DIATOMS	.4	.6	2.2	.0	.0	.0	2.0	4.6	1.2	1.6
DIVISION TOTAL	8.3	11.0	143.5	5.6	4.1	.7	175.2	77.2	53.2	
CHLOROPHYTA										
BULBOCHAETAE SPP.	.0	.0	219.5	.0	.0	.0	199.1	157.4	72.0	100.8
MOUGEOTIA SPP.	.0	.0	2.2	.0	.0	.0	.0	3.1	.7	1.2
DIVISION TOTAL	.0	.0	221.7	.0	.0	.0	199.1	160.5	72.7	
CYANOPHYTA										
PHORMIDIUM SPP.	.2	.0	.0	.0	.0	.0	.0	.0	.0	.1
DIVISION TOTAL	.2	.0	.0	.0	.0	.0	.0	.0	.0	
EUGLENOPHYTA										
TOTAL DENSITY	8.5	11.0	365.2	5.6	4.1	.7	374.4	237.7	125.9	

SHANNON INDEX = 1.497
VARIANCE = .2169
MAXIMUM INDEX = 3.497
EVENNESS = .428
NO OF SPECIES = 33

DIVERSITY INDEX CALCULATIONS

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
ROOSC AQUATIC SURVEYS
SAMPLE DATE: 071879

STATION NUMBER - 21
NUMBER OF REPITITIONS - 8

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES SPP.	.0	3.9	7.7	.0	.0	.0	.0	.0	1.5	2.9
CYCLOTELLA MENEGHENIANA	13.2	121.5	49.8	27.8	35.2	64.8	83.3	102.7	62.3	37.9
CYMBELLA CISTULA	1.5	.0	.0	.0	.0	.0	.0	.0	.2	.5
CYMBELLA MINUTA VAR. SILESIACA	.0	.0	1.1	.0	.0	.0	.0	3.0	.5	1.1
FRAGILARIA VAUCHERIAE	.0	.0	16.6	.0	.0	.0	.0	.0	2.1	5.9
HANTZSCHIA AMPHIOXYS	.0	.0	.0	.0	.0	4.6	9.3	6.0	2.5	3.7
MASTOGLOIA ELLIPTICA	.0	.0	.0	2.3	.0	.0	.0	6.0	1.0	2.2
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	.0	.0	2.3	.0	4.6	.0	.0	.9	1.7
NAVICULA PELLICULOSA	.0	.0	.0	.0	.0	4.6	.0	.0	.6	1.6
NAVICULA SECRETA VAR. APICULATA	1.5	.0	.0	.0	.0	.0	9.3	.0	1.3	3.2
NAVICULA TRIPUNCTATA	1.5	3.9	2.2	.0	.0	.0	.0	6.0	1.7	2.2
NAVICULA SPP.	.0	.0	.0	.0	.0	.0	.0	3.0	.4	1.1
NITZSCHIA FONTICOLA	39.7	204.5	76.4	173.6	46.3	101.9	175.9	301.9	140.0	90.4
NITZSCHIA FRUSTULUM	.0	.0	2.2	.0	.0	9.3	.0	6.0	2.2	3.6
NITZSCHIA HOLSATICA	.0	19.3	4.4	16.2	7.4	9.3	9.3	18.1	10.5	6.8
NITZSCHIA LATENS	.0	7.7	3.3	.0	.0	.0	.0	.0	1.4	2.8
NITZSCHIA MICROCEPHALA	.0	19.3	2.2	4.6	1.9	9.3	.0	27.2	8.1	10.1
NITZSCHIA SPP.	.0	.0	2.2	.0	1.9	.0	.0	.0	.5	.9
RHOPALODIA GIBBERULA	1.5	3.9	3.3	.0	.0	.0	.0	27.2	4.5	9.3
SURIRELLA OVATA	.0	.0	.0	.0	.0	.0	.0	3.0	.4	1.1
SYNEDRA PULCHELLA	2.9	13.5	8.9	13.9	11.1	13.9	.0	24.2	11.0	7.4
SYNEDRA SPP.	.0	.0	.0	.0	.0	.0	.0	3.0	.4	1.1
UNIDENTIFIED PENNATE DIATOMS	.0	5.8	2.2	.0	.0	.0	.0	3.0	1.4	2.1
DIVISION TOTAL	61.7	403.2	182.6	240.7	103.7	222.2	287.0	540.5	255.2	
CHLOROPHYTA										
BULBOCHAETAE SPP.	149.9	19.3	110.7	238.4	185.2	467.6	1027.8	75.5	284.3	329.6
MOUGEOTIA SPP.	.0	.0	4.4	9.3	1.9	.0	.0	.0	1.9	3.4
DIVISION TOTAL	149.9	19.3	115.1	247.7	187.0	467.6	1027.8	75.5	286.2	
CYANOPHYTA										
CALOTHRIX SPP.	.0	.0	.0	.0	3.7	.0	.0	.0	.5	1.3
ENTOPHYSALIS RIVULARIS	.0	.0	.0	4.6	.0	.0	.0	.0	.6	1.6
OSCILLATORIA PSEUDOGEMINATA	.0	.0	1.1	.0	.0	.0	.0	3.0	.5	1.1
DIVISION TOTAL	.0	.0	1.1	4.6	3.7	.0	.0	3.0	1.6	
EUGLENOPHYTA										
TOTAL DENSITY	211.6	422.5	298.8	493.1	294.4	689.8	1314.8	619.0	543.0	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.442
VARIANCE = .0032
MAXIMUM INDEX = 3.332
EVENNESS = .433
NO OF SPECIES = 28

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 071879

STATION NUMBER - 27
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	.0	.0	1.2	3.7					1.2	1.7
ACHNANTHES SPP.	8.2	28.9	24.3	8.1					17.4	10.8
AMPHORA PERPUSILLA	27.2	52.1	49.8	40.6					42.4	11.3
COCCONEIS PEDICULUS	.0	.0	3.6	.0					.9	1.8
COCCONEIS PLACENTULA	2.7	11.6	2.4	.4					4.3	5.0
CYCLOTELLA MENEGHENIANA	.0	11.6	6.1	.4					4.5	5.5
CYMBELLA AFFINIS	5.4	5.8	6.1	.0					4.3	2.9
CYMBELLA CYMBIFORMIS	.0	5.8	.0	.0					1.4	2.9
CYMBELLA MINUTA	10.9	28.9	19.4	5.3					16.1	10.3
CYMBELLA MINUTA VAR. SILESIACA	.0	.0	8.5	.0					2.1	4.3
CYMBELLA SINUATA	.0	17.4	4.9	3.7					6.5	7.5
DIATOMA VULGARE	.0	17.4	52.3	.4					17.5	24.5
EPITHEMIA SOREX	.0	11.6	1.2	10.2					5.7	6.0
FRAGILARIA VAUCHERIAE	.0	5.8	9.7	1.6					4.3	4.4
GOMPHONEMA ANGUSTATUM	.0	.0	1.2	.0					.3	.6
GOMPHONEMA CLEVEI	.0	11.6	.0	.0					2.9	5.8
GOMPHONEMA GRACILE	2.7	.0	.0	.0					.7	1.4
GOMPHONEMA INTRICATUM	.0	.0	13.4	1.6					3.7	6.5
GOMPHONEMA OLIVACEUM	76.3	150.5	121.5	9.7					89.5	61.3
GOMPHONEMA PARVULUM	.0	.0	1.2	.0					.3	.6
GOMPHONEMA SPP.	.0	17.4	2.4	.0					4.9	8.4
NAVICULA ARVENSIS	19.1	23.1	3.6	1.2					11.8	11.0
NAVICULA CRYPTOCEPHALA VAR. VENETA	57.2	138.9	48.6	7.7					63.1	54.9
NAVICULA NOTHA	.0	.0	14.6	2.0					4.2	7.3
NAVICULA PELLICULOSA	32.7	81.0	24.3	9.7					36.9	30.9
NAVICULA PYGMAEA	.0	.0	.2	.4					.1	.2
NAVICULA RADIOSA	.0	.0	8.5	.0					2.1	4.3
NAVICULA SALINARUM VAR. INTERMEDIA	.0	28.9	13.4	2.4					11.2	13.2
NAVICULA SECRETA VAR. APICULATA	.0	5.8	.0	1.2					1.8	2.8
NAVICULA SUBHAMULATA	.0	5.8	.0	.0					1.4	2.9
NAVICULA TRIPUNCTATA	8.2	5.8	18.2	3.2					8.9	6.6
NAVICULA VIRIDULA	13.6	17.4	42.5	6.1					19.9	15.8
NAVICULA SPP.	.0	.0	4.9	4.1					2.2	2.6
NITZSCHIA ACICULARIS	.0	.0	1.2	.0					.3	.6
NITZSCHIA APICULATA	.0	.0	1.2	.4					.4	.6
NITZSCHIA DISSIPATA	2.7	28.9	1.2	.0					8.2	13.9
NITZSCHIA FONTICOLA	38.1	86.8	59.5	16.2					50.2	30.1
NITZSCHIA FRUSTULUM	.0	.0	1.2	.8					.5	.6
NITZSCHIA HOLSATICA	21.8	52.1	25.5	18.3					29.4	15.4
NITZSCHIA LATENS	.0	5.8	.0	.0					1.4	2.9
NITZSCHIA MICROCEPHALA	2.7	.0	.0	.0					.7	1.4
NITZSCHIA PALEA	.0	.0	3.6	.0					.9	1.8
NITZSCHIA SPP.	5.4	11.6	4.9	2.4					6.1	3.9
RHOICOSPHENIA CURVATA	.0	11.6	37.7	.4					12.4	17.7
RHOPALODIA GIBBERULA	.0	.0	.0	.4					.1	.2
STEPHANODISCUS HANTZSCHII	.0	.0	.0	.4					.1	.2
SURIRELLA ANGUSTATA	.0	5.8	.0	.0					1.4	2.9
SURIRELLA OVATA	.0	11.6	1.2	.8					3.4	5.5
SURIRELLA OVALIS	.0	.0	1.2	.0					.3	.6
SYNEDRA DELICATISSIMA	2.7	.0	1.2	.0					1.	1.3
SYNEDRA ULNA	10.9	179.4	106.9	10.2					76.8	82.1
UNIDENTIFIED PENNATE DIATOMS	5.4	.0	13.4	4.5					5.8	5.6
DIVISION TOTAL	354.0	1076.4	768.0	178.7					594.3	

CHLOROPHYTA							
CLADOPHORA SPP.	.0	.0	8.5	.0		2.1	4.3
MOUGEOTIA SPP.	.0	.0	1.2	.0		.3	.6
STIGEOCLONIUM SPP.	2.7	.0	.0	.0		.7	1.4
DIVISION TOTAL	2.7	.0	9.7	.0		3.1	
CYANOPHYTA							
CALOTHRIX SPP.	.0	52.1	4.9	.0		14.2	25.3
LYNGBYA SPP.	680.8	590.3	49.8	8.9		332.5	352.3
SPIRULINA SPP.	.0	.0	.0	.4		.1	.2
OSCILLATORIA SPP.	.0	.0	4.9	.0		1.2	2.4
DIVISION TOTAL	680.8	642.4	59.5	9.3		348.0	
EUGLENOPHYTA							
TOTAL DENSITY	1037.6	1718.7	837.2	188.0		945.4	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.639
VARIANCE = .0023
MAXIMUM INDEX = 4.078
EVENNESS = .647
NO OF SPECIES = 59

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RIOSC AQUATIC SURVEYS
SAMPLE DATE: 071879

STATION NUMBER - 29
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	.0	.0	.0	2.1					.5	1.1
ACHNANTHES SPP.	4.3	1.3	1.5	25.6					8.2	11.7
AMPHORA PERPUSILLA	109.6	10.7	1.9	55.6					44.4	49.4
COCCONEIS PLACENTULA	1.1	.4	.2	.0					.4	.5
CYCLOTELLA MENEGHENIANA	4.3	1.1	.0	6.4					3.0	3.0
CYMBELLA AFFINIS	.0	.0	.1	4.3					1.1	2.1
CYMBELLA MINUTA	2.2	1.1	.1	17.1					5.1	8.0
CYMBELLA MINUTA VAR. SILESIACA	.0	.0	.1	.0					.0	.1
CYMBELLA SINUATA	7.6	.9	.2	12.8					5.4	6.0
DIATOMA VULGARE	.0	.4	.0	6.4					1.7	3.1
EPITHEMIA SOREX	2.2	.2	.1	6.4					2.2	2.9
FRAGILARIA PINNATA	.0	.0	.0	2.1					.5	1.1
FRAGILARIA VAUCHERIAE	1.1	.4	.2	12.8					3.6	6.1
GOMPHONEMA INTRICATUM	.0	.2	.3	.0					.1	.2
GOMPHONEMA OLIVACEUM	6.5	.9	.6	76.9					21.2	37.2
GOMPHONEMA PARVULUM	.0	.0	.1	.0					.0	.1
GOMPHONEMA SPP.	.0	.0	.0	4.3					1.1	2.1
NAVICULA ARVENSIS	3.3	.2	.1	.0					.9	1.6
NAVICULA CRYPTOCEPHALA	.0	.0	.0	4.3					1.1	2.1
NAVICULA CRYPTOCEPHALA VAR. VENETA	9.8	1.5	1.0	74.8					21.8	35.6
NAVICULA NOTHA	2.2	.0	.1	.0					.6	1.1
NAVICULA PELLICULOSA	9.8	2.3	.0	15.0					6.8	6.9
NAVICULA RADIOSA	.0	.2	.0	2.1					.6	1.0
NAVICULA SALINARUM VAR. INTERMEDIA	.0	.2	.0	.0					.1	.1
NAVICULA SECRETA VAR. APICULATA	.0	.0	.0	8.5					2.1	4.3
NAVICULA TRIPUNCTATA	2.2	.0	.0	12.8					3.7	6.1
NAVICULA VIRIDULA	2.2	.0	.2	17.1					4.9	8.2
NAVICULA SPP.	5.4	.0	.0	4.3					2.4	2.8
NITZSCHIA DISSIPATA	1.1	.0	.1	.0					.3	.5
NITZSCHIA FONTICOLA	21.7	2.8	.4	23.5					12.1	12.2
NITZSCHIA FRUSTULUM	.0	.0	.0	2.1					.5	1.1
NITZSCHIA HOLSATICA	9.8	3.8	1.9	53.4					17.2	24.3
NITZSCHIA LINEARIS	.0	.2	.0	.0					.1	.1
NITZSCHIA SPP.	2.2	.9	.2	6.4					2.4	2.8
RHOICOSPHENIA CURVATA	1.1	.0	.0	2.1					.8	1.0
SURIRELLA OVATA	.0	.0	.1	4.3					1.1	2.1
SYNEDRA ULNA	3.3	1.1	.5	32.1					9.2	15.3
UNIDENTIFIED PENNATE DIATOMS	.0	1.5	.1	10.7					3.1	5.1
DIVISION TOTAL	212.7	32.2	10.3	506.4					190.4	
CHLOROPHYTA										
BULBOCHAETAE SPP.	.0	.9	.0	.0					.2	.4
DIVISION TOTAL	.0	.9	.0	.0					.2	

CYANOPHYT						
CALOTHRIX SPP.	[illegible]	[illegible]	[illegible]	6.4	2.1	3.0
LYNGBYA [illegible]	84.5	1.1	.0	213.7	74.8	100.7
OSCILLATORIA SPP.	1.1	[illegible]	[illegible]	.0	.3	.5
PHORMIDIUM SPP.	[illegible]	1.5	.1	87.6	22.3	43.5
DIVISION TOTAL	87.9	[illegible]	.1	307.7	99.6	
EUGLENOPHYT						
TOTAL [illegible]	[illegible]	35.6	10.4	814.1	290.2	

DIVERSITY INDEX CALCULATION

SHANNON INDEX = [illegible]
VARIANCE = [illegible]
MAXIMUM INDEX = [illegible]
EVENNESS = [illegible]
NO [illegible] = [illegible]

AUGUST

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 081379

STATION NUMBER - 13
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES SPP.	4068.2	981.5	4822.8	2303.1					3043.9	1733.6
CYMBELLA MICROCEPHALA	.0	.0	32.8	39.4					18.0	21.0
FRAGILARIA VAUCHERIAE	32.8	.0	.0	.0					8.2	16.4
NAVICULA CRYPTOCEPHALA VAR. VENETA	32.8	.0	32.8	19.7					21.3	15.5
NAVICULA SPP.	.0	9.3	.0	.0					2.3	4.6
NITZSCHIA FONTICOLA	229.7	18.5	32.8	.0					70.2	107.1
DIVISION TOTAL	4363.5	1009.3	4921.3	2362.2					3164.1	
CHLOROPHYTA										
STIGEOCLONIUM SPP.	.0	.0	.0	19.7					4.9	9.8
DIVISION TOTAL	.0	.0	.0	19.7					4.9	
CYANOPHYTA										
LYNGBYA SPP.	.0	.0	.0	19.7					4.9	9.8
PHORMIDIUM SPP.	.0	175.9	98.4	19.7					73.5	80.4
DIVISION TOTAL	.0	175.9	98.4	39.4					78.4	
EUGLENOPHYTA										
TOTAL DENSITY	4363.5	1185.2	5019.7	2421.3					3247.4	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = .331
VARIANCE = .0003
MAXIMUM INDEX = 2.197
EVENNESS = .151
NO OF SPECIES = 9

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 081379

STATION NUMBER = 14
NUMBER OF REPITITIONS = 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	.0	73.8	32.7	.0					26.6	35.0
ACHNANTHES SPP.	4201.4	1058.1	405.1	1881.6					1886.6	1657.3
AMPHORA OVALIS	.0	.0	6.5	.0					1.6	3.3
CYCLOTELLA MENEGHENIANA	.0	49.2	32.7	17.1					24.7	21.1
CYMBELLA AFFINIS	34.7	24.6	32.7	102.6					48.7	36.2
CYMBELLA CYMBIFORMIS	173.6	49.2	13.1	51.3					71.8	70.1
CYMBELLA MINUTA	138.9	147.6	39.2	34.2					90.0	61.7
CYMBELLA MINUTA VAR. SILESIACA	34.7	.0	6.5	.0					10.3	16.6
DIATOMA TENUE VAR. ELONGATUM	173.6	147.6	39.2	.0					90.1	83.7
DIATOMA VULGARE VAR. GRANDE	.0	246.1	19.6	17.1					70.7	117.2
FRAGILARIA CAPUCINA	.0	.0	137.2	85.5					55.7	67.7
FRAGILARIA CAPUCINA	104.2	959.6	.0	.0					266.0	465.1
FRAGILARIA PINNATA	.0	.0	19.6	17.1					9.2	10.6
FRAGILARIA VAUCHERIAE	138.9	123.0	78.4	.0					85.1	62.2
GOMPHONEMA AFFINE	34.7	.0	.0	.0					8.7	17.4
GOMPHONEMA ANGUSTATUM	.0	49.2	.0	51.3					25.1	29.0
GOMPHONEMA PARVULUM	.0	24.6	.0	.0					6.2	12.3
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	49.2	13.1	68.4					32.7	31.6
NAVICULA PELLICULOSA	34.7	.0	6.5	.0					10.3	16.6
NAVICULA SECRETA VAR. APICULATA	138.9	270.7	365.9	154.0					232.4	106.8
NAVICULA VIRIDULA	.0	73.8	13.1	17.1					26.0	32.7
NITZSCHIA DENTICULA	381.9	270.7	65.3	171.1					222.3	135.5
NITZSCHIA FONTICOLA	104.2	73.8	52.3	119.7					87.5	30.3
NITZSCHIA FRUSTULUM	.0	24.6	.0	17.1					10.4	12.4
NITZSCHIA HOLSATICA	138.9	246.1	32.7	17.1					108.7	106.4
NITZSCHIA MICROCEPHALA	.0	.0	6.5	.0					1.6	3.3
NITZSCHIA SPP.	34.7	.0	6.5	17.1					14.6	15.2
NITZSCHIA VITREA	.0	49.2	.0	.0					12.3	24.6
SURIRELLA OVATA	.0	49.2	39.2	.0					22.1	25.8
SURIRELLA OVALIS	.0	24.6	.0	.0					6.2	12.3
SYNEDRA FAMELICA	451.4	2485.2	673.0	359.2					992.2	1004.0
SYNEDRA FASCICULATA	173.6	836.6	104.5	171.1					321.5	344.9
SYNEDRA SPP.	34.7	221.5	26.1	.0					70.6	101.7
UNIDENTIFIED PENNATE DIATOMS	381.9	49.2	39.2	17.1					121.9	173.9
DIVISION TOTAL	6909.7	7677.2	2306.6	3386.9					5070.1	
CHLOROPHYTA										
MOUGEOTIA SPP.	34.7	.0	.0	.0					8.7	17.4
DIVISION TOTAL	34.7	.0	.0	.0					8.7	
CYANOPHYTA										
EUGLENOPHYTA										
TOTAL DENSITY	6944.4	7677.2	2306.6	3386.9					5078.8	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.397
VARIANCE = .0004
MAXIMUM INDEX = 3.555
EVENNESS = .649
NO OF SPECIES = 35

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 081379

STATION NUMBER = 20
NUMBER OF REPITITIONS = 8

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	.2	.0	.0	.0	1.	.0	.0	.0	.1	.3
ACHNANTHES SPP.	5.6	7.2	23.1	6.3	57.5	22.6	13.6	19.8	19.5	17.0
AMPHORA OVALIS	.0	.0	.0	.0	1.	.0	.0	.0	.1	.4
CYCLOTELLA MENEGHENIANA	9.8	45.1	85.6	42.1	47.6	173.6	51.7	44.1	62.5	49.4
CYMBELLA AFFINIS	.2	.0	.0	.0	.0	.0	.0	.0	.0	.1
CYMBELLA CYMBIFORMIS	.2	.0	1.2	.7	.0	.0	.0	.0	.3	.4
CYMBELLA MINUTA	.0	.0	.0	.0	.0	.0	2.7	.0	.3	1.
CYMBELLA MINUTA VAR. SILESIACA	.0	.0	.0	.0	1.	.0	.0	.0	.1	.4
CYMBELLA SPP.	.0	.0	.0	.0	.0	.0	2.7	.0	.3	1.
ENTOMONEIS PALLUDOSA	.0	1.0	.0	.7	.0	.0	.0	.0	.2	.4
FRAGILARIA CAPUCINA	3.7	15.4	2.3	.7	.0	.0	.0	2.2	3.0	5.2
FRAGILARIA PINNATA	.0	.0	.0	.0	.0	.0	1.4	.0	.2	.5
FRAGILARIA VAUCHERIAE	.8	.0	.0	.0	.0	.0	.0	.0	.1	.3
GOMPHONEMA ANGUSTATUM	19.3	4.1	.0	9.8	5.0	15.6	8.2	9.9	9.0	6.2
GOMPHONEMA GRACILE	.0	.0	.0	.0	.0	8.7	.0	.0	1.1	3.1
GOMPHONEMA PARVULUM	.0	.0	.0	4.9	3.0	.0	.0	1.1	1.1	1.9
HANTZSCHIA AMPHIOXYS	.0	.0	.0	.0	.0	.0	1.4	.0	.2	.5
NAVICULA CRYPTOCEPHALA	1.5	.0	8.1	3.5	3.0	10.4	6.8	11.0	5.5	4.1
NAVICULA CRYPTOCEPHALA VAR. VENETA	1.7	8.2	6.9	2.8	2.0	24.3	13.6	13.2	9.1	7.7
NAVICULA HEUFLERI	.0	.0	.0	.7	.0	1.7	.0	.0	.3	.6
NAVICULA NOTHA	.0	.0	.0	.0	.0	1.7	.0	.0	.2	.6
NAVICULA PELLICULOSA	.0	.0	.0	2.1	2.0	6.9	1.4	.0	1.5	2.4
NAVICULA SECRETA VAR. APICULATA	.2	.0	1.2	.0	1.	.0	1.4	.0	.5	.6
NAVICULA TRIPUNCTATA	1.2	4.1	.0	.7	2.0	.0	.0	2.2	1.3	1.4
NAVICULA VIRIDULA	.8	9.2	8.1	3.5	4.0	8.7	9.5	11.0	6.9	3.6
NAVICULA SPP.	.2	1.0	.0	.0	.0	.0	.0	.0	.2	.4
NITZSCHIA APICULATA	.0	.0	1.2	.0	.0	.0	.0	.0	.1	.4
NITZSCHIA CLAUSII	.0	1.0	.0	.0	.0	.0	.0	.0	.1	.4
NITZSCHIA DENTICULA	.8	.0	1.2	.0	.0	.0	1.4	1.1	.5	.6
NITZSCHIA FONTICOLA	.6	12.3	13.9	4.9	9.9	39.9	10.9	6.6	12.4	11.9
NITZSCHIA FRUSTULUM	.0	.0	.0	.0	1.	.0	.0	.0	.1	.4
NITZSCHIA HOLSATICA	2.7	2.1	.0	.0	.0	.0	.0	.0	.6	1.1
NITZSCHIA LATENS	.0	.0	1.2	.0	.0	.0	.0	.0	.1	.4
NITZSCHIA LINEARIS	.0	.0	.0	.0	.0	1.7	.0	.0	.2	.6
NITZSCHIA MICROCEPHALA	.0	1.0	8.1	1.4	9.9	1.7	4.1	5.5	4.0	3.6
NITZSCHIA PALEA	.2	.0	.0	.0	1.	.0	.0	.0	.1	.3
NITZSCHIA SPP.	.0	.0	.0	.0	.0	.0	5.4	6.6	1.5	2.8
NITZSCHIA SP. #1	5.6	102.5	116.9	70.1	99.2	159.7	136.2	110.2	100.1	46.4
PINNULARIA BOREALIS	.0	.0	.0	.0	.0	1.7	.0	.0	.2	.6
RHOPALODIA GIBBERULA	.2	2.1	1.2	.0	.0	3.5	1.4	.0	1.0	1.3
SURIRELLA OVATA	.4	.0	.0	.0	.0	.0	.0	.0	.0	.1
SURIRELLA OVALIS	.4	.0	.0	.0	.0	1.7	.0	.0	.3	.6
SYNEDRA FAMELICA	.0	1.0	1.2	.7	1.	6.9	1.4	4.4	2.1	2.4
SYNEDRA FASCICULATA	1.4	.0	.0	.0	6.0	.0	.0	1.1	1.1	2.1
SYNEDRA PULCHELLA	.0	.0	.0	.0	.0	3.5	.0	.0	.4	1.2
SYNEDRA ULNA	.4	.0	.0	.0	1.	.0	.0	.0	.2	.4
THALASSIOSIRA FLUVIATILIS	.0	.0	.0	.0	.0	3.5	.0	.0	.4	1.2
UNICENTIFIED CENTRIC DIATOMS	.0	1.0	.0	.0	.0	.0	.0	.0	.1	.4
UNIDENTIFIED PENNATE DIATOMS	.8	.0	1.2	1.4	4.0	10.4	1.4	.0	2.4	3.5
DIVISION TOTAL	58.6	218.3	282.4	157.1	262.9	508.7	276.4	250.2	251.8	

CHLOROPHYTA									
CYANOPHYTA									
PHORMIDIUM SPP.	.0	.0	.0	.0	.0	.0	.0	3.3	.4
DIVISION TOTAL	.0	.0	.0	.0	.0	.0	.0	3.3	.4
EUGLENOPHYTA									
TOTAL DENSITY	58.6	218.3	232.4	157.1	262.9	508.7	276.4	253.5	252.3

DIVERSITY INDEX CALCULATIONS

SHANNON 100 X = [illegible]
VARIANCE = [illegible]
MAXIMUM 100 X = 3.[illegible]
EVENNESS = [illegible]
NO OF SPECIES = [illegible]

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 081379

STATION NUMBER - 21
NUMBER OF REPITITIONS - 8

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES SPP.	2.0	13.2	23.9	2.6	2.3	32.4	4.5	11.1	11.5	11.3
AMPHORA COFFEIFORMIS	.0	.0	.0	.0	2.3	.0	.0	.0	.3	.8
AMPHORA OVALIS	.0	.0	.0	.0	.0	.0	.0	2.8	.3	1.
CYCLOTELLA MENEGHENIANA	43.7	36.4	86.2	97.0	34.2	64.8	67.2	25.0	56.8	26.1
CYMBELLA MINUTA	.0	3.3	.0	.0	.0	.0	.0	.0	.4	1.2
ENTOMONEIS PALLUDOSA	2.0	.0	.0	.0	.0	.0	.0	.0	.2	.7
GOMPHONEMA ANGUSTATUM	11.9	9.9	23.9	5.2	11.4	.0	4.5	2.8	8.7	7.5
GOMPHONEMA PARVULUM	6.0	13.2	43.1	13.1	15.9	41.7	4.5	16.7	19.3	14.9
MASTOGLOIA ELLIPTICA	2.0	.0	.0	5.2	.0	.0	.0	.0	.9	1.9
NAVICULA CINCTA	.0	.0	.0	.0	.0	4.6	.0	.0	.6	1.6
NAVICULA CRYPTOCEPHALA	6.0	3.3	28.7	13.1	9.1	9.3	4.5	.0	9.2	8.9
NAVICULA CRYPTOCEPHALA VAR. VENETA	2.0	.0	.0	.0	4.6	.0	13.4	2.8	2.8	4.6
NAVICULA PELLICULOSA	.0	3.3	.0	5.2	.0	4.6	4.5	2.8	2.6	2.2
NAVICULA TRIPUNCTATA	.0	.0	4.8	7.9	6.8	9.3	4.5	2.8	4.5	3.4
NAVICULA VIRIDULA	2.0	3.3	9.6	7.9	2.3	.0	4.5	.0	3.7	3.5
NITZSCHIA FONTICOLA	33.7	330.7	71.8	104.8	109.3	509.3	80.6	150.0	173.8	162.7
NITZSCHIA HOLSATICA	.0	.0	.0	13.1	25.0	83.3	13.4	.0	16.9	28.4
NITZSCHIA MICROCEPHALA	4.0	9.9	4.8	15.7	13.7	32.4	26.9	19.4	15.8	10.1
NITZSCHIA SPP.	6.0	.0	33.5	23.6	4.6	4.6	26.9	11.1	13.8	12.4
NITZSCHIA SP. #1	198.4	284.4	483.7	262.1	230.0	300.9	448.0	286.1	311.7	101.2
SYNEDRA PULCHELLA	.0	3.3	.0	.0	.0	.0	.0	.0	.4	1.2
THALASSIOSIRA FLUVIATILIS	.0	.0	.0	.0	.0	.0	4.5	.0	.6	1.6
UNIDENTIFIED PENNATE DIATOMS	6.0	.0	.0	10.5	.0	9.3	.0	.0	3.2	4.6
DIVISION TOTAL	325.4	714.3	814.2	587.0	471.3	1106.5	712.4	533.3	658.0	
CHLOROPHYTA										
STIGEOCLONIUM SPP.	.0	.0	.0	.0	.0	4.6	.0	2.8	.9	1.8
DIVISION TOTAL	.0	.0	.0	.0	.0	4.6	.0	2.8	.9	
CYANOPHYTA										
CALOTHRIX SPP.	2.0	.0	.0	.0	.0	.0	.0	.0	.2	.7
PHORMIDIUM SPP.	4.0	3.3	.0	.0	.0	32.4	31.4	8.3	9.9	13.8
DIVISION TOTAL	6.0	3.3	.0	.0	.0	32.4	31.4	8.3	10.2	
EUGLENOPHYTA										
TOTAL DENSITY	331.3	717.6	814.2	587.0	471.3	1143.5	743.7	544.4	669.1	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.712
VARIANCE = .027
MAXIMUM INDEX = 3.258
EVENNESS = .525
NO OF SPECIES = 26

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RUOSC AQUATIC SURVEYS
SAMPLE DATE: 081479

STATION NUMBER - 27
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES SPP.	8.9	5.6	16.1	12.1					10.7	4.5
AMPHORA PERPUSILLA	890.3	555.6	119.5	402.6					492.0	321.2
COCCONEIS PEDICULUS	.0	.0	.0	12.1					3.0	6.0
COCCONEIS PLACENTULA	8.9	5.6	.0	36.2					12.7	16.1
CYCLOTELLA MENEGHENIANA	8.9	11.1	9.7	12.1					10.4	1.4
CYMBELLA AFFINIS	.0	5.6	6.5	.0					3.0	3.5
CYMBELLA CYMBIFORMIS	.0	5.6	.0	.0					1.4	2.8
CYMBELLA MINUTA	8.9	.0	.0	.0					2.2	4.5
CYMBELLA SINUATA	.0	.0	.0	24.2					6.0	12.1
DIATOMA VULGARE	.0	5.6	3.2	.0					2.2	2.7
EPITHEMIA SOREX	106.8	111.1	348.8	40.3					151.8	135.3
GOMPHONEMA ANGUSTATUM	35.6	5.6	3.2	.0					11.1	16.5
GOMPHONEMA INTRICATUM	.0	5.6	6.5	.0					3.0	3.5
GOMPHONEMA PARVULUM	.0	.0	3.2	4.0					1.8	2.1
NAVICULA ARVENSIS	8.9	11.1	3.2	4.0					6.8	3.8
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	.0	.0	12.1					3.0	6.0
NAVICULA NOTHA	35.6	11.1	12.9	.0					14.9	14.9
NAVICULA RADIOSA	.0	.0	3.2	.0					.8	1.6
NAVICULA SALINARUM VAR. INTERMEDIA	8.9	.0	9.7	8.1					6.7	4.5
NAVICULA TRIPUNCTATA	8.9	.0	9.7	4.0					5.7	4.5
NAVICULA VIRIDULA	.0	.0	.0	4.0					1.0	2.0
NAVICULA SPP.	.0	5.6	.0	.0					1.4	2.8
NITZSCHIA DISSIPATA	.0	.0	3.2	.0					.8	1.6
NITZSCHIA FRUTICOLA	62.3	111.1	200.3	96.6					117.6	58.8
NITZSCHIA MICROCEPHALA	.0	.0	3.2	4.0					1.8	2.1
NITZSCHIA SPP.	44.5	11.1	71.1	32.2					39.7	25.0
NITZSCHIA SP. #1	.0	5.6	.0	.0					1.4	2.8
RHOPALODIA GIBBA	.0	.0	3.2	.0					.8	1.6
RHOICOSPHENIA CURVATA	.0	.0	3.2	.0					.8	1.6
SYNEDRA PULCHELLA	.0	.0	.0	4.0					1.0	2.0
UNIDENTIFIED PENNATE DIATOMS	62.3	5.6	19.4	32.2					29.9	24.2
DIVISION TOTAL	1299.9	877.8	859.2	744.8					945.4	
CHLOROPHYTA										
STIGEOCLONIUM SPP.	.0	.0	3.2	.0					.8	1.6
DIVISION TOTAL	.0	.0	3.2	.0					.8	
CYANOPHYTA										
CALOTHRIX SPP.	89.0	38.9	77.5	88.6					73.5	23.7
LYNGBYA SPP.	142.5	188.9	74.3	201.3					151.7	57.5
PHORMIDIUM SPP.	26.7	.0	9.7	.0					9.1	12.6
DIVISION TOTAL	258.2	227.8	161.5	289.9					234.3	
EUGLENOPHYTA										
TOTAL DENSITY	1558.0	1105.6	1023.9	1034.6					1180.5	

SHANNON INDEX = 2.048
VARIANCE = .0016
MAXIMUM INDEX = 3.555
EVENNESS = .576
NO OF SPECIES = 35

DIVERSITY INDEX CALCULATIONS

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 081479

STATION NUMBER - 29
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES SPP.	22.5	4.8	5.6	13.8					11.7	8.3
AMPHORA PERPUSILLA	9.3	4.8	19.4	51.1					21.1	20.9
COCCONEIS PLACENTULA	34.5	95.9	138.9	11.7					70.3	57.9
CYCLOTELLA MENEGHENIANA	9.3	16.3	12.5	3.1					10.3	5.6
CYMBELLA AFFINIS	5.3	1.	.0	1.0					1.8	2.4
CYMBELLA MINUTA	.0	1.	.0	.5					.4	.5
CYMBELLA SINUATA	9.3	4.8	9.7	1.5					6.3	3.9
DIATOMA VULGARE	1.3	.0	.0	.0					.3	.7
EPITHEMIA SOREX	132.5	9.6	26.4	47.0					53.9	54.6
FRAGILARIA SPP.	2.7	.0	.0	.0					.7	1.3
GOMPHONEMA INTRICATUM	45.1	16.3	13.9	7.7					20.7	16.6
GOMPHONEMA PARVULUM	.0	1.	.0	.5					.4	.5
GYROSIGMA SPENCERII	.0	1.	.0	.0					.2	.5
HANTZSCHIA AMPHIOXYS	1.3	.0	.0	.0					.3	.7
NAVICULA ARVENSIS	.0	.0	.0	1.0					.3	.5
NAVICULA CRYPTOCEPHALA	.0	.0	1.4	4.6					1.5	2.2
NAVICULA CRYPTOCEPHALA VAR. VENETA	1.3	.0	1.4	.0					.7	.8
NAVICULA NOTHA	4.0	.0	1.4	1.0					1.6	1.7
NAVICULA PELLICULOSA	.0	.0	.0	1.0					.3	.5
NAVICULA SECRETA VAR. APICULATA	5.3	.0	1.4	.0					1.7	2.5
NAVICULA TRIPUNCTATA	1.3	.0	.0	.5					.5	.6
NITZSCHIA DISSIPATA	.0	.0	1.4	.0					.3	.7
NITZSCHIA FONTICOLA	23.9	12.5	19.4	24.0					19.9	5.4
NITZSCHIA MICROCEPHALA	.0	.0	.0	.5					.1	.3
NITZSCHIA SPP.	5.3	2.9	8.3	6.1					5.7	2.3
NITZSCHIA SP. #1	.0	4.8	.0	1.0					1.5	2.3
RHOICOSPHENIA CURVATA	5.3	1.	2.8	1.5					2.6	1.9
SYNEDRA FAMELICA	.0	.0	.0	.5					.1	.3
THALASSIOSIRA FLUVIATILIS	.0	1.	.0	.5					.4	.5
UNIDENTIFIED PENNATE DIATOMS	2.7	1.9	1.4	3.6					2.4	.9
DIVISION TOTAL	322.0	180.3	265.3	183.8					237.9	
CHLOROPHYTA										
CYANOPHYTA										
ANABAENA SPP.	.0	.0	1.4	.0					.3	.7
CALOTHRIX SPP.	2.7	.0	37.5	4.1					11.1	17.7
LYNGBYA SPP.	.0	2.9	6.9	.0					2.5	3.3
OSCILLATORIA SPP.	.0	1.	1.4	.5					.7	.6
PHORMIDIUM SPP.	.0	.0	2.8	1.5					1.1	1.3
DIVISION TOTAL	2.7	3.8	50.0	6.1					15.7	
EUGLENOPHYTA										
TOTAL DENSITY	324.7	184.2	315.3	190.0					253.5	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.353
VARIANCE = .0057
MAXIMUM INDEX = 3.55
EVENNESS = .662
NO OF SPECIES = 35

OCTOBER

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RHOSC AQUATIC SURVEYS
SAMPLE DATE: 100879

STATION NUMBER - 13
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES SPP.	23939.5	6585.2	13934.4	15098.6					14889.4	7113.8
FRAGILARIA VAUCHERIAE	291.1	72.8	109.1	36.4					127.3	113.1
NAVICULA CRYPTOCEPHALA VAR. VENETA	36.4	36.4	72.8	36.4					45.5	18.2
NAVICULA VIRIDULA	36.4	36.4	36.4	.0					27.3	18.2
NITZSCHIA SPP.	36.4	.0	36.4	36.4					27.3	18.2
NITZSCHIA VITREA	36.4	.0	36.4	.0					18.2	21.0
SURIRELLA OVATA	.0	.0	.0	36.4					9.1	18.2
SYNEDRA RADIANS	36.4	36.4	.0	.0					18.2	21.0
DIVISION TOTAL	24412.4	6767.1	14225.4	15244.1					15162.3	
CHLOROPHYTA										
MOUGEOTIA SPP.	.0	.0	36.4	.0					9.1	18.2
DIVISION TOTAL	.0	.0	36.4	.0					9.1	
CYANOPHYTA										
PHORMIDIUM SPP.	.0	327.4	363.8	291.1					245.6	166.4
DIVISION TOTAL	.0	327.4	363.8	291.1					245.6	
EUGLENOPHYTA										
TOTAL DENSITY	24412.4	7094.5	14625.6	15535.2					15416.9	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = .203
VARIANCE = .0001
MAXIMUM INDEX = 2.303
EVENNESS = .088
NO OF SPECIES = 10

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: 100879

STATION NUMBER - 14
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES LANCEOLATA	70.2	233.9	120.3	99.2					130.9	71.7
ACHNANTHES SPP.	3683.7	9589.3	4009.5	297.6					4395.0	3848.1
COCCONEIS PLACENTULA	.0	.0	.0	13.2					3.3	6.6
CYMBELLA AFFINIS	3438.1	1637.2	320.8	52.9					1362.2	1547.5
CYMBELLA CYMBIFORMIS	35.1	.0	.0	.0					8.8	17.5
CYMBELLA MINUTA	385.9	93.6	.0	13.2					123.2	180.0
DIATOMA TENUE VAR. ELONGATUM	35.1	93.6	80.2	13.2					55.5	37.7
ENTOMONEIS PALLUDOSA	35.1	.0	.0	.0					8.8	17.5
FRAGILARIA CAPUCINA	.0	93.6	.0	33.1					31.7	44.1
FRAGILARIA VAUCHERIAE	70.2	187.1	160.4	244.7					165.6	72.7
GOMPHONEMA ANGUSTATUM	280.7	46.8	.0	112.4					110.0	122.8
NAVICULA ARVENSIS	.0	.0	.0	92.6					23.1	46.3
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	.0	.0	105.8					26.5	52.9
NAVICULA NOTHA	35.1	.0	.0	19.8					13.7	17.0
NAVICULA PELLICULOSA	70.2	327.4	40.1	.0					109.4	148.2
NAVICULA SECRETA VAR. APICULATA	456.1	187.1	240.6	191.8					268.9	127.1
NAVICULA VIRIDULA	.0	.0	80.2	19.8					25.0	38.0
NITZSCHIA ACICULARIS	.0	46.8	.0	112.4					39.8	53.2
NITZSCHIA DENTICULA	771.8	280.7	360.9	46.3					364.9	302.3
NITZSCHIA FONTICOLA	.0	.0	.0	59.5					14.9	29.8
NITZSCHIA FRUSTULUM	.0	.0	.0	13.2					3.3	6.6
NITZSCHIA LINEARIS	.0	.0	.0	13.2					3.3	6.6
NITZSCHIA SPP.	70.2	.0	80.2	502.6					163.3	229.1
NITZSCHIA SP. #1	.0	.0	.0	449.7					112.4	224.9
SURIRELLA OVATA	70.2	.0	40.1	138.9					62.3	58.6
SYNEDRA FAMELICA	3157.5	514.5	400.9	661.4					1183.6	1320.2
SYNEDRA FASCICULATA	947.2	187.1	160.4	152.1					361.7	390.6
SYNEDRA RADIANS	.0	.0	.0	231.5					57.9	115.7
SYNEDRA ULNA	35.1	.0	.0	19.8					13.7	17.0
THALASSIOSIRA FLUVIATILIS	385.9	46.8	80.2	46.3					139.8	164.8
UNIDENTIFIED PENNATE DIATOMS	105.2	233.9	120.3	33.1					123.1	83.1
DIVISION TOTAL	14138.4	13799.2	6294.9	3789.7					9505.5	
CHLOROPHYTA										
CYANOPHYTA										
PHORMIDIUM SPP.	.0	.0	40.1	.0					10.0	20.0
DIVISION TOTAL	.0	.0	40.1	.0					10.0	
EUGLENOPHYTA										
TOTAL DENSITY	14138.4	13799.2	6335.0	3789.7					9515.6	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.613
VARIANCE = .0[illegible]
MAXIMUM INDEX = 3.466
EVENNESS = .581
NO OF SPECIES = 32

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RROSC AQUATIC SURVEYS
SAMPLE DATE: 100879

STATION NUMBER - 20
NUMBER OF REPITITIONS - 8

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES SPP.	578.7	442.7	396.8	389.7	372.8	384.6	483.9	771.6	477.6	137.2
CYCLOTELLA MENEGHENIANA	17.4	8.7	27.8	30.9	21.9	3.6	62.7	7.7	22.6	18.9
CYMBELLA MINUTA	.0	8.7	.0	.0	7.3	.0	.0	.0	2.0	3.7
CYMBELLA MINUTA VAR. SILESIACA	5.8	.0	.0	.0	.0	.0	.0	.0	.7	2.0
FRAGILARIA VAUCHERIAE	.0	.0	.0	3.9	.0	.0	.0	.0	.5	1.4
HANTZSCHIA AMPHIOXYS	.0	.0	.0	.0	.0	.0	4.5	.0	.6	1.6
NAVICULA CRYPTOCEPHALA	.0	8.7	4.0	3.9	.0	.0	4.5	7.7	3.6	3.4
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	.0	4.0	.0	.0	.0	.0	.0	.5	1.4
NAVICULA PELLICULOSA	.0	4.3	.0	.0	.0	.0	.0	.0	.5	1.5
NAVICULA SECRETA VAR. APICULATA	.0	.0	.0	.0	.0	.0	.0	7.7	1.	2.7
NAVICULA VIRIDULA	.0	.0	.0	3.9	14.6	.0	.0	.0	2.3	5.2
NAVICULA SPP.	.0	.0	.0	.0	3.7	.0	.0	.0	.5	1.3
NITZSCHIA FONTICOLA	.0	30.4	4.0	7.7	.0	.0	.0	7.7	6.2	10.3
NITZSCHIA MICROCEPHALA	11.6	.0	4.0	.0	3.7	3.6	.0	.0	2.8	4.0
NITZSCHIA SPP.	.0	17.4	4.0	3.9	3.7	.0	9.0	.0	4.7	5.9
NITZSCHIA SP. #1	5.8	.0	7.9	27.0	21.9	21.4	26.9	15.4	15.8	10.2
SURIRELLA OVATA	.0	.0	.0	.0	7.3	.0	4.5	.0	1.5	2.8
UNIDENTIFIED PENNATE DIATOMS	.0	.0	4.0	.0	.0	.0	.0	.0	.5	1.4
DIVISION TOTAL	619.2	520.8	456.3	470.7	456.9	413.1	595.9	817.9	543.9	
CHLOROPHYTA										
CYANOPHYTA										
PHORMIDIUM SPP.	.0	13.0	4.0	7.7	.0	.0	.0	.0	3.1	4.9
DIVISION TOTAL	.0	13.0	4.0	7.7	.0	.0	.0	.0	3.1	
EUGLENOPHYTA										
TOTAL DENSITY	619.2	533.9	460.3	478.4	456.9	413.1	595.9	817.9	546.9	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = .652
VARIANCE = .0036
MAXIMUM INDEX = 2.944
EVENNESS = .221
NO OF SPECIES = 19

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RNOSC AQUATIC SURVEYS
SAMPLE DATE: 100879

STATION NUMBER = 21
NUMBER OF REPITITIONS = 8

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES SPP.	721.4	953.7	902.8	434.0	1981.0	402.0	452.5	467.6	789.4	528.9
CYCLOTELLA MENEGHENIANA	.0	18.5	26.0	13.0	65.5	7.3	17.9	4.6	19.1	20.5
CYMBELLA MINUTA	.0	.0	.0	.0	.0	3.7	.0	.0	.5	1.3
NAVICULA CRYPTOCEPHALA	7.1	.0	.0	8.7	.0	3.7	.0	.0	2.4	3.6
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	.0	26.0	.0	16.4	.0	35.8	4.6	10.4	14.1
NAVICULA VIRIDULA	14.3	.0	.0	.0	.0	.0	.0	.0	1.8	5.1
NITZSCHIA APICULATA	.0	.0	.0	.0	.0	.0	4.5	.0	.6	1.6
NITZSCHIA FONTICOLA	.0	.0	.0	.0	49.1	.0	.0	27.8	9.6	18.7
NITZSCHIA MICROCEPHALA	.0	9.3	8.7	.0	.0	.0	4.5	4.6	3.4	4.0
NITZSCHIA SPP.	7.1	.0	.0	.0	.0	3.7	9.0	.0	2.5	3.7
NITZSCHIA SP. #1	21.4	46.3	8.7	43.4	65.5	7.3	35.8	37.0	33.2	19.8
SYNEDRA SPP.	.0	.0	.0	.0	32.7	.0	.0	.0	4.1	11.6
UNIDENTIFIED PENNATE DIATOMS.	.0	.0	.0	.0	16.4	.0	.0	.0	2.0	5.8
DIVISION TOTAL	771.4	1027.8	972.2	499.1	2226.6	427.6	560.0	546.3	878.9	
CHLOROPHYTA										
BULBOCHAETAE SPP.	.0	.0	17.4	.0	.0	.0	.0	.0	2.2	6.1
DIVISION TOTAL	.0	.0	17.4	.0	.0	.0	.0	.0	2.2	
CYANOPHYTA										
PHORMIDIUM SPP.	7.1	9.3	8.7	.0	32.7	73.1	71.7	.0	25.3	30.8
DIVISION TOTAL	7.1	9.3	8.7	.0	32.7	73.1	71.7	.0	25.3	
EUGLENOPHYTA										
TOTAL DENSITY	778.6	1037.0	998.3	499.1	2259.3	500.7	631.7	546.3	906.4	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = .648
VARIANCE = .0021
MAXIMUM INDEX = 2.708
EVENNESS = .239
NO OF SPECIES = 15

PHYTOPLANKTON - SPECIES DIVERSITY ESTIMATES
RROSC AQUATIC SURVEYS
SAMPLE DATE: 10/1979

STATION NUMBER - 27
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES SPP.	30.5	96.9	160.7	76.3					91.1	59.1
AMPHORA PERPUSILLA	15.3	9.1	40.2	15.3					19.9	13.8
COCCONEIS PEDICULUS	20.4	12.1	35.2	10.2					19.5	11.4
COCCONEIS PLACENTULA	5.1	18.2	25.1	35.6					21.0	12.8
CYCLOTELLA MENEGHENIANA	.0	6.1	10.0	15.3					7.8	6.4
CYMBELLA AFFINIS	20.4	3.0	5.0	30.5					14.7	13.1
CYMBELLA CYMBIFORMIS	5.1	.0	.0	.0					1.3	2.5
CYMBELLA SINUATA	5.1	3.0	.0	.0					2.0	2.5
DIATOMA VULGARE	5.1	6.1	10.0	20.4					10.4	7.0
EPITHEMIA SOREX	508.8	302.9	502.3	524.0					459.5	104.8
EPITHEMIA TURGIDA	5.1	.0	.0	.0					1.3	2.5
GOMPHONEMA INTRICATUM	5.1	24.2	40.2	50.9					30.1	19.9
GOMPHONEMA PARVULUM	.0	3.0	.0	.0					.8	1.5
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	12.1	25.1	30.5					16.9	13.7
NAVICULA NOTHA	.0	.0	25.1	.0					6.3	12.6
NAVICULA PUPULA	.0	3.0	.0	.0					.8	1.5
NAVICULA SALINARUM VAR. INTERMEDIA	35.6	24.2	40.2	167.9					67.0	67.6
NAVICULA TRIPUNCTATA	25.4	9.1	25.1	25.4					21.3	8.1
NAVICULA VIRIDULA	.0	3.0	25.1	15.3					10.9	11.6
NITZSCHIA APICULATA	5.1	.0	.0	.0					1.3	2.5
NITZSCHIA DISSIPATA	.0	3.0	.0	.0					.8	1.5
NITZSCHIA FONTICOLA	5.1	15.1	15.1	30.5					16.5	10.5
NITZSCHIA LINEARIS	.0	9.1	.0	.0					2.3	4.5
NITZSCHIA MICROCEPHALA	.0	.0	10.0	.0					2.5	5.0
NITZSCHIA SIGMA	.0	.0	.0	5.1					1.3	2.5
NITZSCHIA SPP.	71.2	24.2	95.4	157.7					87.2	55.6
NITZSCHIA SP. #1	.0	6.1	15.1	.0					5.3	7.1
RHOICOSPHENIA CURVATA	56.0	27.3	75.3	81.4					60.0	24.4
SURIRELLA OVATA	.0	.0	.0	5.1					1.3	2.5
SYNEDRA SPP.	.0	.0	25.1	.0					6.3	12.6
SYNEDRA ULNA	.0	.0	10.0	.0					2.5	5.0
UNIDENTIFIED PENNATE DIATOMS	30.5	9.1	45.2	35.6					30.1	15.3
DIVISION TOTAL	854.7	630.1	1260.8	1332.9					1019.6	
CHLOROPHYTA										
CYANOPHYTA										
CALOTHRIX SPP.	106.8	75.7	50.2	330.7					140.9	128.6
LYNGBYA SPP.	147.5	90.9	115.5	412.1					191.5	148.9
OSCILLATORIA SPP.	.0	6.1	.0	.0					1.5	3.0
PHORMIDIUM SPP.	.0	15.1	140.6	.0					38.9	68.2
DIVISION TOTAL	254.4	187.8	306.4	742.8					372.8	
EUGLENOPHYTA										
TOTAL DENSITY	1109.1	817.9	1567.2	2075.7					1392.5	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.439
VARIANCE = .0012
MAXIMUM INDEX = 3.584
EVENNESS = .681
NO OF SPECIES = 36

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
RBOSC AQUATIC SURVEYS
SAMPLE DATE: [illegible] 979

STATION NUMBER - 29
NUMBER OF REPITITIONS - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES SPP.	16.9	63.5	69.4	588.2					184.5	270.1
AMPHORA PERPUSILLA	8.0	8.7	7.7	29.1					13.4	10.5
COCCONEIS PEDICULUS	4.0	2.9	5.8	17.5					7.5	6.7
COCCONEIS PLACENTULA	27.3	18.7	27.0	34.9					27.0	6.6
CYCLOTELLA MENEGHENIANA	4.0	10.1	7.7	5.8					6.9	2.6
CYMBELLA AFFINIS	1.6	11.5	3.9	69.9					21.7	32.4
CYMBELLA MINUTA	.0	1.4	.0	.0					.4	.7
CYMBELLA SINUATA	40.2	17.3	19.3	64.1					35.2	21.8
DIATOMA VULGARE	.0	2.9	.0	.0					.7	1.4
EPITHEMIA SOREX	82.0	144.2	192.9	355.2					193.6	116.9
FRAGILARIA VAUCHERIAE	2.4	1.4	.0	.0					1.	1.2
GOMPHONEMA CLEVEI	.0	5.8	.0	.0					1.4	2.9
GOMPHONEMA INTRICATUM	19.3	42.4	15.4	145.6					55.2	61.3
GOMPHONEMA OLIVACEUM	1.6	1.4	.0	.0					.8	.9
GOMPHONEMA PARVULUM	.0	.0	.0	17.5					4.4	8.7
GOMPHONEMA TRUNCATUM	.0	.0	1.9	.0					.5	1.
GOMPHONEMA SPP.	.0	7.2	3.9	17.5					7.1	7.5
NAVICULA CRYPTOCEPHALA VAR. VENETA	2.4	18.7	5.8	17.5					11.1	8.2
NAVICULA NOTHA	1.6	2.9	5.8	.0					2.6	2.4
NAVICULA SALINARUM VAR. INTERMEDIA	4.0	38.9	15.4	23.3					20.4	14.7
NAVICULA SECRETA VAR. APICULATA	.0	.0	3.9	.0					1.	1.9
NAVICULA TRIPUNCTATA	1.6	5.8	7.7	40.8					14.0	18.0
NAVICULA VIRIDULA	.0	1.4	.0	11.6					3.3	5.6
NITZSCHIA DISSIPATA	.0	.0	.0	5.8					1.5	2.9
NITZSCHIA FONTICOLA	10.4	4.3	3.9	122.3					35.2	58.1
NITZSCHIA HOLSATICA	.0	8.7	5.8	.0					3.6	4.3
NITZSCHIA LATENS	.0	.0	1.9	.0					.5	1.
NITZSCHIA LINEARIS	.0	.0	1.9	.0					.5	1.
NITZSCHIA MICROCEPHALA	1.6	2.9	5.8	17.5					6.9	7.2
NITZSCHIA SPP.	20.1	57.7	73.3	302.8					113.5	128.2
NITZSCHIA SP. #1	.0	1.4	.0	.0					.4	.7
RHOICOSPHENIA CURVATA	6.4	30.3	36.7	40.8					28.5	15.4
SURIRELLA OVATA	.0	.0	1.9	5.8					1.9	2.7
UNIDENTIFIED PENNATE DIATOMS	5.6	14.4	7.7	58.2					21.5	24.8
DIVISION TOTAL	261.2	525.0	532.4	1991.6					827.6	
CHLOROPHYTA										
MOUGEOTIA SPP.	.0	.0	.0	46.6					11.6	23.3
DIVISION TOTAL	.0	.0	.0	46.6					11.6	
CYANOPHYTA										
CALOTHRIX SPP.	15.1	.0	.0	11.6					6.9	8.2
LYNGBYA SPP.	32.2	14.4	38.6	128.1					53.3	50.9
PHORMIDIUM SPP.	4.8	4.3	.0	17.5					6.7	7.5
DIVISION TOTAL	53.0	18.7	38.6	157.2					66.9	
EUGLENOPHYTA										
TOTAL DENSITY	314.3	543.7	571.0	2195.4					906.1	

SHANNON INDEX = 2.[illegible]6
VARIANCE = .[illegible]15
MAXIMUM INDEX = 3.638
EVENNESS = .716
NO OF SPECIES = 38

DIVERSITY INDEX CALCULATIONS

APPENDIX 4-6

Periphyton Biomass Estimates for all Stations by Sampling Date for 1979

PERIPHYTON BIOMASS ANALYSIS
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - APRIL 1979
ANALYST - HIATT
AREA SCRAPED - 50 CM2

STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)	BIOMASS (MG/CM2)	STATION AVERAGE (MG/CM2)
13A	110.9395	110.8476	1.838	
13B	105.8455	105.7637	1.636	1.737
14A	104.4997	104.4375	1.244	
14B	108.8818	108.8448	.740	.992
20A	113.6400	113.5831	1.138	
20B	112.8262	112.8048	.428	.783
21A	154.2554	154.1905	1.298	
21B	113.0923	112.9931	1.984	1.641
27A	115.3921	115.2829	2.144	
27B	93.7542	93.6149	2.786	2.465
29A	104.0629	104.0224	.810	
29B	106.1297	106.1008	.578	.694

PERIPHYTON BIOMASS ANALYSIS
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - MAY 1979
ANALYST - HIATT
AREA SCRAPED - 50 CM2

STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)	BIOMASS (MG/CM2)	STATION AVERAGE (MG/CM2)
13A	109.2024	109.1722	.604	
13B	105.1731	105.1448	.566	.585
14A	114.0188	113.9331	1.714	
14B	113.5049	113.4559	.960	1.337
20A	104.2898	104.2568	.660	
20B	104.1972	104.1704	.536	.598
21A	92.4303	92.3805	.396	
21B	107.5368	107.4550	1.636	1.016

PERIPHYTON BIOMASS ANALYSIS
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - JUNE 1979
ANALYST - HIATT
AREA SCRAPED - 50 CM2

STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)	BIOMASS (MG/CM2)	STATION AVERAGE (MG/CM2)
13A	106.9281	106.8675	1.212	
13B	108.8462	108.8267	.390	.801
14A	117.4997	117.2949	4.096	
14B	104.7373	104.7038	.670	2.383
20A	104.6041	104.5131	1.820	
20B	105.7627	105.5940	2.174	1.997
21A	113.4686	113.3513	2.346	
21B	92.6006	92.5219	1.574	1.960

PERIPHYTON BIOMASS ANALYSIS
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - JULY 1979
ANALYST - HIATT
AREA SCRAPED - 50 CM2

STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)	BIOMASS (MG/CM2)	STATION AVERAGE (MG/CM2)
13A	112.7789	112.7324	.930	
13B	104.8855	104.8749	.212	.571
14A	106.7737	106.7149	1.176	
14B	113.5486	113.5085	.802	.989
20A	104.9717	104.9534	.366	
20B	103.8795	103.8693	.204	.285
21A	92.6723	92.5418	2.610	
21B	113.0941	112.9512	2.858	2.734
27A	114.3593	114.2936	1.314	
27B	114.3199	114.2349	1.700	1.507
29A	104.4114	104.3437	1.354	
29B	108.6534	108.6489	.090	.722

PERIPHYTON BIOMASS ANALYSIS
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - AUGUST 1979
ANALYST - HIATT
AREA SCRAPED - 50 CM2

STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)	BIOMASS (MG/CM2)	STATION AVERAGE (MG/CM2)
13A	105.0233	105.0092	.282	
13B	105.0097	104.9824	.546	.414
14A	114.2819	114.1963	1.712	
14B	104.4171	104.3480	1.382	1.547
20A	113.3095	113.2786	.618	
20B	104.4093	104.3537	1.112	.865
21A	106.1569	106.1278	.582	
21B	114.3843	114.3293	1.100	.841
27A	113.7688	113.6201	2.974	
27B	113.8254	113.7166	2.176	2.575
29A	108.8223	108.7850	.746	
29B	92.4403	92.3835	1.196	.971

PERIPHYTON BIOMASS ANALYSIS
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - OCTOBER 1979
ANALYST - HIATT
AREA SCRAPED - 50 CM2

STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)	BIOMASS (MG/CM2)	STATION AVERAGE (MG/CM2)
13A	104.1687	104.1125	1.124	
13B	113.9284	113.8642	1.284	1.204
14A	108.7950	108.6558	2.784	
14B	106.6369	106.5147	2.444	2.614
20A	112.6646	112.6380	.532	
20B	92.2669	92.2538	.262	.397
21A	112.3430	112.3144	.572	
21B	106.0924	106.0639	.570	.571
27A	115.1510	114.8281	6.458	
27B	116.5708	116.2392	6.632	6.545
29A	112.5945	111.9099	13.692	
29B	110.4269	110.0972	6.794	10.243

APPENDIX 4-7

Species Composition of Macroinvertebrates at each Sampling Station
over all Sampling Periods for 1979

BENTHOS SPECIES LIST
RBOSC AQUATIC STUDIES
1979

TAXON	STATION NUMBER					
	13	14	20	21	27	29
PHYLUM NEMATODA	X	X				X
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA		X	X		X	X
ORDER HAPLOTAXIDA						
FAMILY ENCHYTRAEIDAE	X	X				
FAMILY TUBIFICIDAE	X	X	X	X	X	X
FAMILY NAIDIDAE	X	X	X	X	X	X
PHYLUM ARTHROPODA						
CLASS ARACHNOIDEA						
ACARI		X	X	X		
CLASS INSECTA						
ORDER COLLEMBOLA	X					
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	X	X	X		X	X
CALLIBAETIS EATON		X				
FAMILY POLYMITARCIDAE						
EPHORON ALBUM SAY					X	
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH					X	X
RHITHROGENA EATON					X	X
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	X	X	X		X	X
EHPHEMERELLA WALSH					X	X
FAMILY LEPTOPHLEBIIDAE						
CHOROTERPES EATON					X	X
TRAVERELLA ALBERTANA MCDUNNOUGH					X	X
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	X				X	X
ORDER ODONATA (ANISOPTERA)					X	
OPHIOGOMPHUS SELYS					X	
ORDER PLECOPTERA						
FAMILY CAPNIDAE	X				X	X
FAMILY CHLOROPERLIDAE						X
FAMILY PERLODIDAE						
ISOPERLA BANKS					X	X
ISOGENOIDES KLAPALEK					X	X
CLAASSENIA SABLUOSA BANKS						X
ORDER HEMIPTERA						
FAMILY CORIXIDAE					X	
ORDER COLEOPTERA			X	X		
FAMILY ELMIDAE						
STENELMIS DUFOUR					X	X
FAMILY HYDROPHILIDAE		X		X		
FAMILY DYTISCIDAE						
AGABUS LEACH		X	X	X		
DERONECTES SHARP			X	X		
DEROVATELLUS SHARP						
LACCOPHILUS LEACH			X	X		
HYDROPORUS CLAIRVILLE		X	X	X		
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS					X	
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET		X	X	X	X	X
CHEUMATOPSYCHE WALLENGREN		X	X	X	X	X

FAMILY HYDROPTILIDAE		X				
HYDROPTILA DALMAN					X	X
MAYATRICHIA ROSS					X	X
OCHROTRICHIA ROSS		X				
FAMILY GLOSSOSOMATIDAE						
PROTOPTILA ROSS						X
ORDER LEPIDOPTERA					X	
FAMILY PYRALIDAE						X
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE		X				
PALPOMYIA GP. SPP. MEIGEN		X	X	X	X	
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI		X	X	X	X	X
PROCLADIUS SKUSE		X				
SUBFAMILY DIAMESINAE	X	X				X
DIAMESA MEIGEN	X	X	X	X		
MONODIAMESA KIEFFER		X				
PSEUDODIAMESA			X			
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER		X	X	X	X	X
CRICOTOPUS VAN DER WULP	X	X	X	X	X	X
EUKIEFFERIELLA THIENEMANN			X	X	X	
ORTHOCLADIUS VAN DER WULP	X	X	X	X	X	X
PSECTROCLADIUS					X	
THIENEMANNIELLA KIEFFER	X	X		X		X
TRICHOCLADIUS					X	
ORTHOCLADINAE A		X	X	X		X
ORTHOCLADINAE B	X	X		X		
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						X
CHIRONOMUS MEIGEN			X	X	X	
CHIRONOMINI NR. PARALAUTERBORNIELL		X	X			X
CRYPTOCHIRONOMUS KIEFFER		X				
ENDOCHIRONOMUS		X			X	X
HETEROTRISSOCLADIUS		X	X	X		
MICROTENDIPES KIEFFER		X	X	X	X	X
PARACLADOPELMA HARRISCH						X
POLYPEDILUM FALLAX GP.		X				
POLYPEDILUM KIEFFER					X	X
PHAENOPSECTRA KIEFFER	X	X			X	X
STEMPELLINA		X		X		
STICTOCHIRONOMUS		X				
TRIBELOS			X			
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	X	X	X	X	X	X
RHEOTANYTARSUS BAIUSE		X	X	X	X	X
TANYTARSUS VAN DER WULP			X	X	X	
CHIRONOMIDAE PUPAE	X	X	X	X	X	X
FAMILY CULICIDAE		X				
FAMILY DOLICHOPODIDAE	X		X	X	X	
FAMILY EPHYDRIDAE	X	X		X		
FAMILY EMPIDIDAE				X	X	
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE)	X	X	X	X		X
SIMULIDAE LARVAE	X	X	X	X	X	X
FAMILY MISCIDAE		X	X	X		
FAMILY RHAGIONIDAE						
ATHERIX VARIEGATA WALKER						
FAMILY TABANIDAE			X			
CHRYSOPS MEIGEN				X		
TABANUS LINNAEUS				X		
FAMILY TIPULIDAE						
HEXATOMA LATRETILLE					X	X

X = ORGANISM IDENTIFIED TO THIS TAXONOMIC LEVEL OBSERVED AT SAMPLING STATION

APPENDIX 4-8

Seasonal Changes in Macroinvertebrate Species Composition at each Sampling Station in 1979

BENTHOS SPECIES LIST
RIOSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 13
1979

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
PHYLUM NEMATODA	X				X	
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY ENCHYTRAEIDAE	X				X	
FAMILY TUBIFICIDAE	X	X	X	X	X	X
FAMILY NAIDIDAE	X	X		X	X	X
PHYLUM ARTHROPODA						
CLASS ARACHNOIDEA						
ACARI						
CLASS INSECTA						
ORDER COLLEMBOLA	X					
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH						X
CALLIBAETIS EATON						
FAMILY POLYMITARCIDAE						
EPHORON ALBUM SAY						
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH						
RHITHROGENA EATON						
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON		X				
ENPHEMERELLA WALSH						
FAMILY LEPTOPHLEBIIDAE						
CHOROTERPES EATON						
TRAVERELLA ALBERTANA MCDUNNOUGH						
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER		X				
ORDER ODONATA (ANISOPTERA)						
OPHIOGOMPHUS SELYS						
ORDER PLECOPTERA						
FAMILY CAPNIDAE						X
FAMILY CHLOROPERLIDAE						
FAMILY PERLODIDAE						
ISOPERLA BANKS						
ISOGENOIDES KLAPALEK						
CLAASSENIA SABLUOSA BANKS						
ORDER HEMIPTERA						
FAMILY CORIXIDAE						
ORDER COLEOPTERA						
FAMILY ELMIDAE						
STENELMIS DUFOUR						
FAMILY HYDROPHILIDAE						
FAMILY DYTISCIDAE						
AGABUS LEACH						
DERONECTES SHARP						
DEROVATELLUS SHARP						
LACCOPHILUS LEACH						
HYDROPORUS CLAIRVILLE						
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET						

CHEUMATOPSYCHE WALLENGREN						
FAMILY HYDROPTILIDAE						
HYDROPTILA DALMAN						
MAYATRICHIA ROSS						
OCHROTRICHIA ROSS						
FAMILY GLOSSOSOMATIDAE						
PROTOPTILA ROSS						
ORDER LEPIDOPTERA						
FAMILY PYRALIDAE						
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN						
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI						
PROCLADIUS SKUSE						
SUBFAMILY DIAMESINAE						X
DIAMESA MEIGEN	X		X	X		X
MONODIAMESA KIEFFER						
PSEUDODIAMESA						
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER						
CRICOTOPUS VAN DER WULP			X	X		X
EUKIEFFERIELLA THIENEMANN						
ORTHOCLADIUS VAN DER WULP				X	X	
PSECTROCLADIUS						
THIENEMANNIELLA KIEFFER						X
TRICHOCLADIUS						
ORTHOCLADINAE A						
ORTHOCLADINAE B	X					
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CHIRONOMUS MEIGEN						
CHIRONOMINI NR. PARALAUTERBORNIELL						
CRYPTOCHIRONOMUS KIEFFER						
ENDOCHIRONOMUS						
HETEROTRISSOCLADIUS						
MICROTENDIPES KIEFFER						
PARACLADOPELMA HARRISCH						
POLYPEDILUM FALLAX GP.						
POLYPEDILUM KIEFFER						
PHAENOPSECTRA KIEFFER					X	
STEMPELLINA						
STICTOCHIRONOMUS						
TRIBELOS						
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	X					
RHEOTANYTARSUS BAUSE						
TANYTARSUS VAN DER WULP						
CHIRONOMIDAE PUPAE						X
FAMILY CULICIDAE						
FAMILY DOLICHOPODIDAE	X					
FAMILY EPHYDRIDAE				X		
FAMILY EMPIDIDAE						
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE)						X
SIMULIDAE LARVAE			X	X		X
FAMILY MISCIDAE						
FAMILY RHAGIONIDAE						
ATHERIX VARIEGATA WALKER						
FAMILY TABANIDAE						
CHRYSOPS MEIGEN						
TABANUS LINNAEUS						
FAMILY TIPULIDAE						
HEXATOMA LATREILLE						

X = ORGANISM IDENTIFIED TO THIS TAXONOMIC LEVEL OBSERVED AT SAMPLING STATION

BENTHOS SPECIES LIST
RAOSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 14
1979

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
PHYLUM NEMATODA	X	X	X	X	X	X
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA	X	X				
ORDER HAPLOTAXIDA						
FAMILY ENCHYTRAEIDAE				X	X	
FAMILY TUBIFICIDAE	X		X	X	X	X
FAMILY NAIDIDAE			X	X		X
PHYLUM ARTHROPODA						
CLASS ARACHNOIDEA						
ACARI					X	
CLASS INSECTA						
ORDER COLLEMBOLA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	X			X	X	X
CALLIBAETIS EATON		X				
FAMILY POLYMITARCIDAE						
EPHORON ALBUM SAY						
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH						
RHITHROGENA EATON						
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	X					
EHPHEMERELLA WALSH						
FAMILY LEPTOPHLEBIIDAE						
CHOROTERPES EATON						
TRAVERELLA ALBERTANA MCDUNNOUGH						
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER						
ORDER ODONATA (ANISOPTERA)						
OPHIOGOMPHUS SELYS						
ORDER PLECOPTERA						
FAMILY CAPNIDAE						
FAMILY CHLOROPERLIDAE						
FAMILY PERLODIDAE						
ISOPERLA BANKS						
ISOGENOIDES KLAPALEK						
CLAASSENIA SABLUOSA BANKS						
ORDER HEMIPTERA						
FAMILY CORIXIDAE						
ORDER COLEOPTERA						
FAMILY ELMIDAE						
STENELMIS DUFOUR						
FAMILY HYDROPHILIDAE			X			
FAMILY DYTISCIDAE						
AGABUS LEACH			X			
DERONECTES SHARP						
DEROVATELLUS SHARP						
LACCOPHILUS LEACH						
HYDROPORUS CLAIRVILLE			X			
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET				X		

CHEUMATOPSYCHE WALLENGREN				X		
FAMILY HYDROPTILIDAE			X			
HYDROPTILA CALMAN						
MAYATRICHIA ROSS						
OCHROTRICHIA ROSS	X					
FAMILY GLOSSOSOMATIDAE						
PROTOPTILA ROSS						
ORDER LEPIDOPTERA						
FAMILY PYRALIDAE						
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE	X					
PALPOMYIA GP. SPP. MEIGEN		X		X		
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	X		X			
PROCLADIUS SKUSE	X					X
SUBFAMILY DIAMESINAE						X
DIAMESA MEIGEN	X	X	X			X
MONODIAMESA KIEFFER					X	
PSEUDODIAMESA						
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	X	X	X	X	X	
CRICOTOPUS VAN DER WULP			X	X	X	X
EUKIEFFERIELLA THIENEMANN						
ORTHOCLADIUS VAN DER WULP	X	X	X	X	X	X
PSECTROCLADIUS						
THIENEMANNIELLA KIEFFER			X	X	X	X
TRICHOCLADIUS						
ORTHOCLADIINAE A					X	
ORTHOCLADIINAE B	X					
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CHIRONOMUS MEIGEN						
CHIRONOMINI NR. PARALAUTERBORNIELL			X		X	
CRYPTOCHIRONOMUS KIEFFER	X	X				
ENDOCHIRONOMUS						X
HETEROTRISSOCLADIUS			X		X	
MICROTENDIPES KIEFFER			X			
PARACLADOPELMA HARRISCH						
POLYPEDILUM FALLAX GP.	X	X			X	
POLYPEDILUM KIEFFER						
PHAENOPSECTRA KIEFFER					X	
STEMPELLINA			X			
STICTOCHIRONOMUS	X	X				
TRIBELOS						
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	X	X	X			
RHEOTANYTARSUS HAIUSE			X			X
TANYTARSUS VAN DER WULP						
CHIRONOMIDAE PUPAE	X	X	X	X		
FAMILY CULICIDAE	X					
FAMILY DOLICHOPODIDAE						
FAMILY EPHYDRIDAE				X		
FAMILY EMPIDIDAE						
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE)				X	X	
SIMULIDAE LARVAE	X		X	X	X	X
FAMILY MISCIDAE			X	X	X	X
FAMILY RHAGIONIDAE						
ATHERIX VARIEGATA WALKER						
FAMILY TABANIDAE						
CHRYSOPS MEIGEN						
TABANUS LINNAEUS						
FAMILY TIPULIDAE						
HEXATOMA LATREILLE						

X = ORGANISM IDENTIFIED TO THIS TAXONOMIC LEVEL OBSERVED AT SAMPLING STATION

BENTHOS SPECIES LIST
RUOSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 20
1979

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
PHYLUM NEMATODA						
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA					X	
ORDER HAPLOTAXIDA						
FAMILY ENCHYTRAEIDAE						
FAMILY TUBIFICIDAE	X	X		X		X
FAMILY NAIDIDAE	X					
PHYLUM ARTHROPODA						
CLASS ARACHNOIDEA						
ACARI				X		
CLASS INSECTA						
ORDER COLLEMBOLA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH		X				
CALLIBAETIS EATON						
FAMILY POLYMITARCIDAE						
EPHORON ALBUM SAY						
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH						
RHITHROGENA EATON						
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON		X				
EHPHEMERELLA WALSH						
FAMILY LEPTOPHLEBIIDAE						
CHOROTERPES EATON						
TRAVERELLA ALBERTANA MCDUNNOUGH						
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER						
ORDER ODONATA (ANISOPTERA)						
OPHIOGOMPHUS SELYS						
ORDER PLECOPTERA						
FAMILY CAPNIDAE						
FAMILY CHLOROPERLIDAE						
FAMILY PERLODIDAE						
ISOPERLA BANKS						
ISOGENOIDES KLAPALEK						
CLAASSENIA SABLUOSA BANKS						
ORDER HEMIPTERA						
FAMILY CORIXIDAE						
ORDER COLEOPTERA					X	
FAMILY ELMIDAE						
STENELMIS DUFOUR						
FAMILY HYDROPHILIDAE						
FAMILY DYTISCIDAE						
AGABUS LEACH			X	X		
DERONECTES SHARP					X	
DEROVATELLUS SHARP						
LACCOPHILUS LEACH						X
HYDROPORUS CLAIRVILLE		X			X	
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET						X

CHEUMATOPSYCHE WALLENGREN						X
FAMILY HYDROPTILIDAE						
HYDROPTILA DALMAN						
MAYATRICHIA ROSS						
OCHROTRICHIA ROSS						
FAMILY GLOSSOSOMATIDAE						
PROTOPTILA ROSS						
ORDER LEPIDOPTERA						
FAMILY PYRALIDAE						
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN				X		X
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI		X		X	X	X
PROCLADIUS SKUSE						
SUBFAMILY DIAMESINAE						
DIAMESA MEIGEN	X					
MONODIAMESA KIEFFER						
PSEUDODIAMESA				X		
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	X	X	X	X		X
CRICOTOPUS VAN DER WULP			X	X	X	X
EUKIEFFERIELLA THIENEMANN			X			
ORTHOCLADIUS VAN DER WULP	X	X	X	X		
PSECTROCLADIUS						
THIENEMANNIELLA KIEFFER						
TRICHOCLADIUS						
ORTHOCLADINAE A		X	X			X
ORTHOCLADINAE B						
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CHIRONOMUS MEIGEN					X	
CHIRONOMINI NR. PARALAUTERBORNIELL				X	X	
CRYPTOCHIRONOMUS KIEFFER						
ENDOCHIRONOMUS						
HETEROTRISSOCLADIUS					X	
MICROTENDIPES KIEFFER						X
PARACLADOPELMA HARRISCH						
POLYPEDILUM FALLAX GP.						
POLYPEDILUM KIEFFER						
PHAENOPSECTRA KIEFFER						
STEMPELLINA						
STICTOCHIRONOMUS						
TRIBELOS		X				
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER		X				
RHEOTANYTARSUS BAUSE					X	X
TANYTARSUS VAN DER WULP				X	X	
CHIRONOMIDAE PUPAE	X	X	X	X	X	X
FAMILY CULICIDAE						
FAMILY DOLICHOPODIDAE		X	X		X	
FAMILY EPHYDRIDAE						
FAMILY EMPIDIDAE						
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE)			X	X		X
SIMULIDAE LARVAE	X	X	X	X	X	X
FAMILY MISCIDAE				X	X	X
FAMILY RHAGIONIDAE						
ATHERIX VARIEGATA WALKER						
FAMILY TABANIDAE				X		
CHRYSOPS MEIGEN						
TABANUS LINNAEUS						
FAMILY TIPULIDAE						
HEXATOMA LATREILLE						

X = ORGANISM IDENTIFIED TO THIS TAXONOMIC LEVEL OBSERVED AT SAMPLING STATION

BENTHOS SPECIES LIST
RJOSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 21
1979

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
PHYLUM NEMATODA						
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY ENCHYTRAEIDAE						
FAMILY TUBIFICIDAE	X	X		X	X	X
FAMILY NAIDIDAE		X				X
PHYLUM ARTHROPODA						
CLASS ARACHNOIDEA						
ACARI				X		
CLASS INSECTA						
ORDER COLLEMBOLA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH						
CALLIBAETIS EATON						
FAMILY POLYMITARCIDAE						
EPHORON ALBUM SAY						
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH						
RHITHROGENA EATON						
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON						
EHPHEMERELLA WALSH						
FAMILY LEPTOPHELBIIDAE						
CHOROTERPES EATON						
TRAVERELLA ALBERTANA MCDUNNOUGH						
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER						
ORDER ODONATA (ANISOPTERA)						
OPHIOGOMPHUS SELYS						
ORDER PLECOPTERA						
FAMILY CAPNIDAE						
FAMILY CHLOROPERLIDAE						
FAMILY PERLODIDAE						
ISOPERLA BANKS						
ISOGENOIDES KLAPALEK						
CLAASSENIA SABULOSA BANKS						
ORDER HEMIPTERA						
FAMILY CORIXIDAE						
ORDER COLEOPTERA				X	X	
FAMILY ELMIDAE						
STENELMIS DUFOUR						
FAMILY HYDROPHILIDAE			X			
FAMILY DYTISCIDAE						
AGABUS LEACH				X		
DERONECTES SHARP		X				
DEROVATELLUS SHARP						
LACCOPHILUS LEACH						X
HYDROPORUS CLAIRVILLE		X				
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCH PICTET						X

PNEUMATOPSYCHE WALLENGREN						X
FAMILY HYDROPTILIDAE						
HYDROPTILA DALMAN						
MAYATRICHIA ROSS						
OCHROTRICHIA ROSS						
FAMILY GLOSSOSOMATIDAE						
PROTOPTILA ROSS						
ORDER LEPIDOPTERA						
FAMILY PYRALIDAE						
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	X			X	X	X
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	X			X	X	X
PROCLADIUS SKUSE						
SUBFAMILY DIAMESINAE						
DIAMESA MEIGEN	X		X			
MONODIAMESA KIEFFER						
PSEUDODIAMESA						
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	X	X	X	X	X	
CRICOTOPUS VAN DER WULP			X	X	X	X
EUKIEFFERIELLA THIENEMANN						X
ORTHOCLADIUS VAN DER WULP	X	X		X	X	
PSECTROCLADIUS						
THIENEMANNIELLA KIEFFER				X		
TRICHOCLADIUS						
ORTHOCLADINAE A						X
ORTHOCLADINAE B		X				
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CHIRONOMUS MEIGEN					X	
CHIRONOMINI NR. PARALAUTERBORNIELL						
CRYPTOCHIRONOMUS KIEFFER						
ENDOCHIRONOMUS						
HETEROTRISSOCLADIUS					X	
MICROTENDIPES KIEFFER					X	
PARACLADOPELMA HARRISCH						
POLYPEDILUM FALLAX GP.						
POLYPEDILUM KIEFFER						
PHAENOPSECTRA KIEFFER						
STEMPELLINA				X		
STICTOCHIRONOMUS						
TRIBELOS						
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER					X	X
RHEOTANYTARSUS BAIUSE					X	
TANYTARSUS VAN DER WULP					X	X
CHIRONOMIDAE PUPAE	X	X	X	X	X	X
FAMILY CULICIDAE						
FAMILY DOLICHOPODIDAE				X		X
FAMILY EPHYDRIDAE					X	
FAMILY EMPIDIDAE					X	
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE)			X	X	X	X
SIMULIDAE LARVAE	X	X	X	X	X	X
FAMILY MISCIDAE					X	X
FAMILY RHAGIONIDAE						
ATHERIX VARIEGATA WALKER						
FAMILY TABANIDAE						
CHRYSOPS MEIGEN					X	
TABANUS LINNAEUS						X
FAMILY TIPULIDAE						
HEXATOMA LATRETILLE						

X = ORGANISM IDENTIFIED TO THIS TAXONOMIC LEVEL OBSERVED AT SAMPLING STATION

BENTHOS SPECIES LIST
RUOSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 27
1979

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
PHYLUM NEMATODA						
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA				X		X
ORDER HAPLOTAXIDA						
FAMILY ENCHYTRAEIDAE						
FAMILY TUBIFICIDAE	X				X	
FAMILY NAIDIDAE	X					X
PHYLUM ARTHROPODA						
CLASS ARACHNOIDEA						
ACARI						
CLASS INSECTA						
ORDER COLLEMBOLA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	X			X	X	X
CALLIBAETIS EATON						
FAMILY POLYMITARCIDAE						
EPHORON ALBUM SAY					X	
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH				X	X	X
RHITHROGENA EATON	X			X	X	
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	X			X		
EHPHEMERELLA WALSH					X	X
FAMILY LEPTOPHLEBIIDAE						
CHOROTERPES EATON					X	X
TRAVERELLA ALBERTANA MCDUNNOUGH					X	
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	X			X	X	X
ORDER ODONATA (ANISOPTERA)	X					
OPHIOGOMPHUS SELYS					X	
ORDER PLECOPTERA						
FAMILY CAPNIDAE						X
FAMILY CHLOROPERLIDAE						
FAMILY PERLODIDAE						
ISOPERLA BANKS	X			X		
ISOGENOIDES KLAPALEK				X		
CLAASSENIA SABULOSA BANKS						
ORDER HEMIPTERA						
FAMILY CORIXIDAE						X
ORDER COLEOPTERA						
FAMILY ELMIDAE						
STENELMIS DUFOUR				X		
FAMILY HYDROPHILIDAE						
FAMILY DYTISCIDAE						
AGABUS LEACH						
OCRONECTES SHARP						
DEROVATELLUS SHARP						
LACCOPHILUS LEACH						
HYDROPORUS CLAIRVILLE						
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS				X	X	X
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET				X	X	X

CHEUMATOPSYCHE WALLENGREN		X	X	X
FAMILY HYDROPTILIDAE				
HYDROPTILA DALMAN		X	X	
MAYATRICHIA ROSS			X	
OCHROTRICHIA ROSS				
FAMILY GLOSSOSOMATIDAE				
PROTOPTILA ROSS				
ORDER LEPIDOPTERA			X	
FAMILY PYRALIDAE				
ORDER DIPTERA				
FAMILY CERATOPOGONIDAE				
PALPOMYIA GP. SPP. MEIGEN		X		X
FAMILY CHIRONOMIDAE				
SUBFAMILY TANYPODINAE				
PENTANEURINI	X	X	X	X
PROCLADIUS SKUSE				
SUBFAMILY DIAMESINAE				
DIAMESA MEIGEN				
MONODIAMESA KIEFFER				
PSEUDODIAMESA				
SUBFAMILY ORTHOCLADIINAE				
CARDIOCLADIUS KIEFFER		X		
CRICOTOPUS VAN DER WULP		X	X	X
EUKIEFFERIELLA THIENEMANN		X		
ORTHOCLADIUS VAN DER WULP		X		X
PSECTROCLADIUS				X
THIENEMANNIELLA KIEFFER				
TRICHOCLADIUS				X
ORTHOCLADINAE A				
ORTHOCLADINAE B				
SUBFAMILY CHIRONOMINAE				
TRIBE CHIRONOMINI				
CHIRONOMUS MEIGEN				X
CHIRONOMINI NR. PARALAUTERBORNIELL				
CRYPTOCHIRONOMUS KIEFFER				
ENDOCHIRONOMUS			X	
HETEROTRISSOCLADIUS				
MICROTENDIPES KIEFFER	X		X	X
PARACLADOPELMA HARRISCH				
POLYPEDILUM FALLAX GP.				
POLYPEDILUM KIEFFER		X	X	X
PHAENOPSECTRA KIEFFER				X
STEMPELLINA				
STICTOCHIRONOMUS				
TRIBELOS				
TRIBE TANYTARSINI				
MICROPSECTRA KIEFFER			X	
RHEOTANYTARSUS BAUSE		X	X	
TANYTARSUS VAN DER WULP				X
CHIRONOMIDAE PUPAE		X	X	X
FAMILY CULICIDAE				
FAMILY DOLICHOPODIDAE			X	
FAMILY EPHYDRIDAE				
FAMILY EMPIDIDAE		X		
FAMILY SIMULIDAE				
SIMULIUM ARCTICUM MALLOCH (PUPAE)				
SIMULIDAE LARVAE		X	X	
FAMILY MISCIDAE				
FAMILY RHAGIONIDAE				
ATHERIX VARIEGATA WALKER				
FAMILY TABANIDAE				
CHRYSOPS MEIGEN				
TABANUS LINNAEUS				
FAMILY TIPULIDAE				
HEXATOMA LATRETILLE		X		

X = ORGANISM IDENTIFIED TO THIS TAXONOMIC LEVEL OBSERVED AT SAMPLING STATION

BENTHOS SPECIES LIST
RBOSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 29
1979

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
PHYLUM NEMATODA	X					
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA				X		
ORDER HAPLOTAXIDA						
FAMILY ENCHYTRAEIDAE						
FAMILY TUBIFICIDAE	X				X	X
FAMILY NAIDIDAE						X
PHYLUM ARTHROPODA						
CLASS ARACHNOIDEA						
ACARI						
CLASS INSECTA						
ORDER COLLEMBOLA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	X			X	X	X
CALLIBAETIS EATON						
FAMILY POLYMITARCIDAE						
EPHORON ALBUM SAY						
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH					X	X
RHITHROGENA EATON	X			X	X	
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	X					
EHPHEMERELLA WALSH						X
FAMILY LEPTOPHLEBIIDAE						
CHOROTERPES EATON					X	
TRAVERELLA ALBERTANA MCDUNNOUGH					X	
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	X			X	X	X
ORDER ODONATA (ANISOPTERA)						
OPHIOGOMPHUS SELYS						
ORDER PLECOPTERA						
FAMILY CAPNIDAE						X
FAMILY CHLOROPERLIDAE						X
FAMILY PERLODIDAE						
ISOPERLA BANKS	X			X		
ISOGENOIDES KLAPALEK	X			X		X
CLAASSENIA SABULOSA BANKS	X					
ORDER HEMIPTERA						
FAMILY CORIXIDAE						
ORDER COLEOPTERA						
FAMILY ELMIDAE						
STENELMIS DUFOUR				X		
FAMILY HYDROPHILIDAE						
FAMILY DYTISCIDAE						
AGABUS LEACH						
DERONECTES SHARP						
DEROVATELLUS SHARP						
LACCOPHILUS LEACH						
HYDROPORUS CLAIRVILLE						
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET				X	X	X

CHEUMATOPSYCHE WALLENGREN				X
FAMILY HYDROPTILIDAE				
HYDROPTILA DALMAN			X	
MAYATRICHIA ROSS			X	
OCHROTRICHIA ROSS				
FAMILY GLOSSOSOMATIDAE				
PROTOPTILA ROSS				X
ORDER LEPIDOPTERA				
FAMILY PYRALIDAE				X
ORDER DIPTERA				
FAMILY CERATOPOGONIDAE				
PALPOMYIA GP. SPP. MEIGEN				
FAMILY CHIRONOMIDAE				
SUBFAMILY TANYPODINAE				
PENTANEURINI	X			
PROCLADIUS SKUSE				
SUBFAMILY DIAMESINAE				X
DIAMESA MEIGEN				
MONODIAMESA KIEFFER				
PSEUDODIAMESA				
SUBFAMILY ORTHOCLADIINAE				
CARDIOCLADIUS KIEFFER		X		
CRICOTOPUS VAN DER WULP		X	X	X
EUKIEFFERIELLA THIENEMANN				
ORTHOCLADIUS VAN DER WULP		X		X
PSECTROCLADIUS				
THIENEMANNIELLA KIEFFER			X	
TRICHOCLADIUS				
ORTHOCLADINAE A				X
ORTHOCLADINAE B				
SUBFAMILY CHIRONOMINAE				
TRIBE CHIRONOMINI		X		
CHIRONOMUS MEIGEN				
CHIRONOMINI NR. PARALAUTERBORNIELL			X	
CRYPTOCHIRONOMUS KIEFFER				
ENDOCHIRONOMUS				X
HETEROTRISSOCLADIUS				
MICROTENDIPES KIEFFER			X	X
PARACLADOPELMA HARRISCH	X			
POLYPEDILUM FALLAX GP.				
POLYPEDILUM KIEFFER			X	X
PHAENOPSECTRA KIEFFER				X
STEMPELLINA				
STICTOCHIRONOMUS				
TRIBELOS				
TRIBE TANYTARSINI				
MICROPSECTRA KIEFFER			X	
RHEOTANYTARSUS BAUSE				X
TANYTARSUS VAN DER WULP				
CHIRONOMIDAE PUPAE	X	X	X	X
FAMILY CULICIDAE				
FAMILY DOLICHOPODIDAE				
FAMILY EPHYDRIDAE				
FAMILY EMPIDIDAE				
FAMILY SIMULIDAE				
SIMULIUM ARCTICUM MALLOCH (PUPAE)				X
SIMULIDAE LARVAE		X	X	X
FAMILY MISCIDAE				
FAMILY RHAGIONIDAE				
ATHERIX VARIEGATA WALKER				
FAMILY TABANIDAE				
CHRYSOPS MEIGEN				
TABANUS LINNAEUS				
FAMILY TIPULIDAE				
HEXATOMA LATRETILLE		X	X	X

X = ORGANISM IDENTIFIED TO THIS TAXONOMIC LEVEL OBSERVED AT SAMPLING STATION

APPENDIX 4-9

Macroinvertebrate Enumeration Data for all Stations
by Sampling Date for 1979

APRIL

BENTHOS DATA SHEET
RIO BLANCO OIL SHALE COMPANY

PROJECT NO. - 116 STATION NO. - 13 LOG NUMBER - (1-3)-116
SAMPLE DATE - 04/25/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 5/29/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
NEMA	PHYLUM NEMATODA	1	0	0
COLL	ORDER COLLEMBOLA	1	0	0
DOLI	FAMILY DOLICHOPODIDAE	0	1	0
MICP	MICROPSECTRA KIEFFER	1	0	0
ORTB	ORTHOCLADINAE B	1	0	1
DIAM	DIAMESA MEIGEN	0	1	1
ENCH	FAMILY ENCHYTRAEIDAE	1	0	0
NAID	FAMILY NAICIDAE	0	1	3
TUBY	FAMILY TUBIFICIDAE	0	0	2

PROJECT NO. - 116 STATION NO. - 14 LOG NUMBER - (4-7)-116
SAMPLE DATE - 04/25/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 5/29/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
BAET	BAETIS LEACH	1	1	0
EPIN	EPHEMERELLA INERMIS EATON	0	1	0
OCHR	OCHROTRICHIA ROSS	2	1	1
NEMA	PHYLUM NEMATODA	1	0	0
CERA	FAMILY CERATOPOGONIDAE	0	0	1
CULI	FAMILY CULICIDAE	0	1	0
SIMU	SIMULIDAE LARVAE	0	3	0
PUPA	CHIRONOMIDAE PUPAE	7	9	14
STIC	STICTOCHIRONOMUS	0	0	1
MICP	MICROPSECTRA KIEFFER	1	14	14
CARD	CARDIOCLADIUS KIEFFER	10	11	6
DIAM	DIAMESA MEIGEN	1	1	1
ORTB	ORTHOCLADINAE B	1	0	0
CRYP	CRYPTOCHIRONOMUS KIEFFER	1	0	3
POLY	POLYPEDILUM FALLAX GP.	2	2	1
ORTH	ORTHOCLADIUS VAN DER WULP	0	2	0
PROC	PROCLADIUS SKUSE	0	2	0
PENT	PENTANEURINI	0	0	1
TUBY	FAMILY TUBIFICIDAE	52	70	118
OLIG	CLASS OLIGOCHAETA	1	1	0

PROJECT NO. - 116 STATION NO. - 20 LOG NUMBER - (8-10)-116
SAMPLE DATE - 04/25/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 5/29/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIDAE LARVAE	6	5	3
PUPA	CHIRONOMIDAE PUPAE	3	11	8
DIAM	DIAMESA MEIGEN	9	5	4
CARD	CARDIOCLADIUS KIEFFER	1	15	3
ORTH	ORTHOCLADIUS VAN DER WULP	0	4	5
NAID	FAMILY NAIDIDAE	1	0	0
TUBY	FAMILY TUBIFICIDAE	0	0	1

PROJECT NO. - 116 STATION NO. - 21 LOG NUMBER - (11-13)-116
SAMPLE DATE - 04/25/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 5/29/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
PALP	PALPOMYIA GP. SPP. MEIGEN	2	2	0
PUPA	CHIRONOMIDAE PUPAE	1	4	2
SIMU	SIMULIDAE LARVAE	0	3	2
CARD	CARDIOCLADIUS KIEFFER	4	10	0
DIAM	DIAMESA MEIGEN	5	3	0
PENT	PENTANEURINI	1	1	0
ORTH	ORTHOCLADIUS VAN DER WULP	0	0	1
TUBY	FAMILY TUBIFICIDAE	0	1	0

PROJECT NO. - 116 STATION NO. - 27 LOG NUMBER - (14-16)-116
SAMPLE DATE - 04/26/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 5/29/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
ISOP	ISOPERLA BANKS	2	0	0
EPIN	EPHEMERELLA INERMIS EATON	32	22	0
BAET	BAETIS LEACH	4	2	0
RHIT	RHITHROGENA EATON	8	1	0
TRIC	TRICORYTHODES ULMER	6	4	0
ODON	ORDER ODONATA (ANISOPTERA)	1	0	0
MICR	MICROTENDIPES KIEFFER	1	0	0
PENT	PENTANEURINI	0	1	0
TUBY	FAMILY TUBIFICIDAE	7	8	1
NAID	FAMILY NAIDIDAE	0	0	1

PROJECT NO. - 116 STATION NO. - 29 LOG NUMBER - (17-19)-116
SAMPLE DATE - 04/26/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 5/22/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
ISOG	ISOGENOIDES KLAPALEK	1	0	0
ISOP	ISOPERLA BANKS	5	1	0
CLAA	CLAASSENIA SABLUOSA BANKS	0	1	0
TRIC	TRICORYTHODES ULMER	1	0	0
EPIN	EPHEMERELLA INERMIS EATON	29	2	5
RHIT	RHITHROGENA EATON	11	16	18
BAET	BAETIS LEACH	9	2	3
PUPA	CHIRONOMIDAE PUPAE	1	0	0
TUBY	FAMILY TUBIFICIDAE	5	39	1
PARA	PARACLADOPELMA HARRISCH	0	1	0
PENT	PENTANEURINI	1	3	0
NEMA	PHYLUM NEMATODA	0	0	1

MAY

BENTHOS DATA SHEET
RIO BLANCO OIL SHALE COMPANY

PROJECT NO. - 116 STATION NO. - 13 LOG NUMBER - (72-74)-116
SAMPLE DATE - 052379 SAMPLES COLLECTED BY - CLARK NO. OF REPLICATES - 3
ANALYSIS DATE - 052979 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
TRIC	TRICORYTHODES ULMER	1	0	0
EPIN	EPHEMERELLA INERMIS EATON	1	0	0
NAID	FAMILY NAICIDAE	2	0	4
TUBY	FAMILY TUBIFICIDAE	4	0	3

PROJECT NO. - 116 STATION NO. - 14 LOG NUMBER - (75-77)-116
SAMPLE DATE - 052379 SAMPLES COLLECTED BY - CLARK NO. OF REPLICATES - 3
ANALYSIS DATE - 060479 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
PUPA	CHIRONOMIDAE PUPAE	0	1	0
NEMA	PHYLUM NEMATODA	3	1	10
PALP	PALPOMYIA GP. SPP. MEIGEN	0	10	1
CALL	CALLIBAETIS EATON	0	2	0
CARD	CARDIOCLADIUS KIEFFER	4	56	4
MICP	MICROPSECTRA KIEFFER	4	0	6
POLY	POLYPEDILUM FALLAX GP.	0	2	0
DIAM	DIAMESA MEIGEN	0	1	0
ORTH	ORTHOCLADIUS VAN DER WULP	0	1	0
CRYP	CRYPTOCHIRONOMUS KIEFFER	0	0	1
STIC	STICTOCHIRONOMUS	0	0	1
OLIG	CLASS OLIGOCHAETA	266	116	688

PROJECT NO. - 116 STATION NO. - 20 LOG NUMBER - (78-80)-116
SAMPLE DATE - 052379 SAMPLES COLLECTED BY - CLARK NO. OF REPLICATES - 3
ANALYSIS DATE - 060479 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIDAE LARVAE	15	23	11
PUPA	CHIRONOMIDAE PUPAE	35	51	31
DOLI	FAMILY DOLICHOPODIDAE	1	0	0
BAET	BAETIS LEACH	2	2	0
EPIN	EPHEMERELLA INERMIS EATON	1	0	0
HYDR	HYDROPORUS CLAIRVILLE	0	0	1
PENT	PENTANEURINI	2	0	0
ORTH	ORTHOCLADIUS VAN DER WULP	41	22	5
ORTA	ORTHOCLADINAE A	40	27	41
TRIB	TRIBELOS	1	0	0
MICP	MICROPSECTRA KIEFFER	1	0	0
CARD	CARDIOCLADIUS KIEFFER	0	0	26
TUBY	FAMILY TUBIFICIDAE	1	0	1

PROJECT NO. - 116 STATION NO. - 21 LOG NUMBER - (81-83)-116
SAMPLE DATE - 052379 SAMPLES COLLECTED BY - CLARK NO. OF REPLICATES - 3
ANALYSIS DATE - 060179 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIDAE LARVAE	0	2	0
PUPA	CHIRONOMIDAE PUPAE	44	23	21
DERO	DERONECTES SHARP	1	1	0
HYDR	HYDROPORUS CLAIRVILLE	0	4	1
ORTH	ORTHOCLADIUS VAN DER WULP	63	28	14
ORTB	ORTHOCLADINAE B	8	9	3
CARD	CARDIOCLADIUS KIEFFER	1	0	0
TUBY	FAMILY TUBIFICIDAE	3	0	2
NAID	FAMILY NAIDIDAE	0	4	0

JUNE

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RIO BLANCO OIL SHALE COMPANY

PROJECT NO. - 111 STATION NO. - 13 LOG NUMBER - (116-118)-116
SAMPLE DATE - 06/20/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 8/2/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
TUBY	FAMILY TUBIFICIDAE	8	15	4
SIMU	SIMULIDAE LARVAE	0	1	0
DIAM	DIAMESA MEIGEN	1	0	0
CRIC	CRICOTOPUS VAN DER WULP	0	1	0

PROJECT NO. - 116 STATION NO. - 14 LOG NUMBER - (119-121)-116
SAMPLE DATE - 06/21/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 8/2/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
TUBY	FAMILY TUBIFICIDAE	14	15	13
NAID	FAMILY NAIOIDAE	152	175	240
NEMA	PHYLUM NEMATODA	0	1	1
SIMU	SIMULIDAE LARVAE	1	2	7
PUPA	CHIRONOMIDAE PUPAE	8	1	5
MUSC	FAMILY MISCIDAE	0	0	1
HYPH	FAMILY HYDROPHILIDAE	1	0	0
AGAB	AGABUS LEACH	1	3	2
HYDR	HYDROPORUS CLAIRVILLE	1	0	0
HYPT	FAMILY HYDROPTILIDAE	0	0	1
MICP	MICROPSECTRA KIEFFER	0	0	3
DIAM	DIAMESA MEIGEN	0	0	4
CHPA	CHIRONOMINI NR. PARALAUTERBORNIELLA	2	2	0
PENI	PENTANEURINI	1	3	1
MICR	MICROTENDIPES KIEFFER	3	4	1
CARD	CARDIOCLADIUS KIEFFER	85	94	63
ORTH	ORTHOCLADIUS VAN DER WULP	1	1	1
HTTR	HETEROTRISSOCLADIUS	4	7	22
RHEO	RHEOTANYTARSUS BAIUSE	5	0	0
STEM	STEMPELLINA	4	0	0
THIE	THIENEMANNIELLA KIEFFER	2	3	2
CRIC	CRICOTOPUS VAN DER WULP	60	0	0

PROJECT NO. - 116 STATION NO. - 20 LOG NUMBER - (122-124)-116
SAMPLE DATE - 06/21/79 SAMPLES COLLECTED BY - RBDSC NO. OF REPLICATES - 3
ANALYSIS DATE - 8/7/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIDAE LARVAE	20	36	17
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	3	4	0
PUPA	CHIRONOMIDAE PUPAE	15	21	12
AGAB	AGABUS LEACH	1	0	0
DOLI	FAMILY DOLICHOPODIDAE	2	0	3
CARD	CARDIOCLADIUS KIEFFER	4	8	13
ORTA	ORTHOCLADINAE A	2	0	0
CRIC	CRICOTOPUS VAN DER WULP	1	1	3
ORTH	ORTHOCLADIUS VAN DER WULP	1	0	0
EUKI	EUKIEFFERIELLA THIENEMANN	4	5	0

PROJECT NO. - 116 STATION NO. - 21 LOG NUMBER - (125-127)-116
SAMPLE DATE - 06/21/79 SAMPLES COLLECTED BY - RBDSC NO. OF REPLICATES - 3
ANALYSIS DATE - 8/7/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIDAE LARVAE	21	23	8
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	1	6	2
PUPA	CHIRONOMIDAE PUPAE	5	17	5
HYPH	FAMILY HYDROPHILIDAE	1	0	0
CRIC	CRICOTOPUS VAN DER WULP	29	12	13
DIAM	DIAMESA MEIGEN	0	1	0
CARD	CARDIOCLADIUS KIEFFER	0	0	3

JULY

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RIO BLANCO OIL SHALE COMPANY

PROJECT NO. - 116 STATION NO. - 13 LOG NUMBER - (255-257)-116
SAMPLE DATE - 07/19/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 9/6/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
TUBY	FAMILY TUBIFICIDAE	10	11	4
NAID	FAMILY NAIDIDAE	10	6	6
EPHY	FAMILY EPHYDRIDAE	0	1	0
SIMU	SIMULIDAE LARVAE	0	0	1
ORTH	ORTHOCLADIUS VAN DER WULP	1	0	0
DIAM	DIAMESA MEIGEN	1	0	0

PROJECT NO. - 116 STATION NO. - 14 LOG NUMBER - (258-260)-116
SAMPLE DATE - 07/19/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 9/6/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	1	2	0
MUSC	FAMILY MISCIDAE	28	18	28
SIMU	SIMULIDAE LARVAE	8	25	36
PUPA	CHIRONOMIDAE PUPAE	3	1	0
PALP	PALPOMYIA GP. SPP. MEIGEN	1	0	1
NEMA	PHYLUM NEMATODA	8	0	0
NAID	FAMILY NAIDIDAE	17	85	53
ENCH	FAMILY ENCHYTRAEIDAE	54	276	34
TUBY	FAMILY TUBIFICIDAE	56	421	282
HYSP	HYDROPSYCHE PICTET	1	0	0
CHEU	CHEUMATOPSYCHE WALLENGREN	1	0	0
BAET	BAETIS LEACH	4	2	7
EPHY	FAMILY EPHYDRIDAE	0	0	1
ORTH	ORTHOCLADIUS VAN DER WULP	159	48	86
THIE	THIENEMANNIELLA KIEFFER	2	2	5
CRIC	CRICOTOPUS VAN DER WULP	24	10	12
CARD	CARDIOCLADIUS KIEFFER	30	2	6

PROJECT NO. - 116 STATION NO. - 20 LOG NUMBER - (261-263)-116
SAMPLE DATE - 07/18/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 9/6/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIDAE LARVAE	23	191	165
PUPA	CHIRONOMIDAE PUPAE	2	2	4
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	1	6	4
MUSC	FAMILY MUSCIDAE	3	1	4
TABA	FAMILY TABANIDAE	0	1	2
PALP	PALPOMYIA GP. SPP. MEIGEN	0	1	2
AGAB	AGABUS LEACH	1	0	0
ACII	ACARI	0	0	1
TUBY	FAMILY TUBIFICIDAE	0	0	2
CARD	CARDIOCLADIUS KIEFFER	3	7	10
PENT	PENTANEURINI	1	3	0
TANS	TANYTARSUS VAN DER WULP	1	0	1
PSEU	PSEUDOCHIRONOMUS	1	0	0
CRIC	CRICOTOPUS VAN DER WULP	0	6	4
ORTH	ORTHOCLADIUS VAN DER WULP	0	1	1
CHPA	CHIRONOMINI NR. PARALAUTERBORNIELLA	0	1	0

PROJECT NO. - 116 STATION NO. - 21 LOG NUMBER - (264-266)-116
SAMPLE DATE - 07/18/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 9/6/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIDAE LARVAE	98	197	64
PALP	PALPOMYIA GP. SPP. MEIGEN	2	3	1
PUPA	CHIRONOMIDAE PUPAE	15	6	5
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	10	11	1
DOLI	FAMILY DOLICHOPODIDAE	0	1	0
AGAB	AGABUS LEACH	1	1	0
COLE	ORDER COLEOPTERA	0	2	0
ACII	ACARI	1	0	0
TUBY	FAMILY TUBIFICIDAE	1	1	0
PENT	PENTANEURINI	1	0	0
CARD	CARDIOCLADIUS KIEFFER	7	11	7
CRIC	CRICOTOPUS VAN DER WULP	14	42	33
THIE	THIENEMANNIELLA KIEFFER	2	0	0
STEM	STEMPELLINA	4	3	0
ORTH	ORTHOCLADIUS VAN DER WULP	0	4	10

PROJECT NO. - 116 STATION NO. - 27 LOG NUMBER - (267-269)-116
SAMPLE DATE - 07/18/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 9/10/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
BAET	BAETIS LEACH	23	61	12
EPIN	EPHEMERELLA INERMIS EATON	7	25	2
HEPP	HEPTAGENIA WALSH	5	19	9
TRIC	TRICORYTHODES ULMER	0	6	6
RHIT	RHITHROGENA EATON	0	3	0
HYSP	HYDROPSYCHE PICTET	3	13	9
CHEU	CHEUMATOPSYCHE WALLENGREN	1	2	6
BRAS	BRACHYCENTRUS CURTIS	2	11	0
HYTL	HYDROPTILA DALMAN	0	1	0
ISOP	ISOPERLA BANKS	0	2	0
ISOG	ISOGENOIDES KLAPALEK	0	2	0
TIPS	HEXATOMA LATREILLE	0	2	0
PUPA	CHIRONOMIDAE PUPAE	0	4	3
PALP	PALPOMYIA GP. SPP. MEIGEN	0	1	0
EMPP	FAMILY EMPIDIDAE	0	1	0
SIMU	SIMULIDAE LARVAE	0	2	0
OLIG	CLASS OLIGOCHAETA	0	1	0
STEN	STENELMIS DUFOUR	0	3	0
CRIC	CRICOTOPUS VAN DER WULP	4	0	1
CARD	CARDIOCLADIUS KIEFFER	1	4	0
EUKI	EUKIEFFERIELLA THIENEMANN	1	1	0
RHEO	RHEOTANYTARSUS BAUSE	0	1	0
PENT	PENTANEURINI	0	1	0
POLS	POLYPEDILUM KIEFFER	0	2	0
ORTH	ORTHOCLADIUS VAN DER WULP	0	10	5

PROJECT NO. - 116 STATION NO. - 29 LOG NUMBER - (270-272)-116
SAMPLE DATE - 07/18/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 9/11/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
ISOP	ISOPERLA BANKS	1	0	0
ISOG	ISOGENOIDES KLAPALEK	2	1	2
HYSP	HYDROPSYCHE PICTET	5	0	0
BAET	BAETIS LEACH	10	31	4
RHIT	RHITHROGENA EATON	44	31	23
TRIC	TRICORYTHODES ULMER	1	0	1
PUPA	CHIRONOMIDAE PUPAE	1	2	0
SIMU	SIMULIDAE LARVAE	3	11	0
TIPS	HEXATOMA LATREILLE	0	0	1
OLIG	CLASS OLIGOCHAETA	3	0	0
STEN	STENELMIS DUFOUR	1	0	0
ORTH	ORTHOCLADIUS VAN DER WULP	3	2	0
CRIC	CRICOTOPUS VAN DER WULP	2	1	2
CARD	CARDIOCLADIUS KIEFFER	0	0	1
CHIT	TRIBE CHIRONOMINI	0	0	1

AUGUST

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RIO BLANCO OIL SHALE COMPANY

PROJECT NO. - 116 STATION NO. - 13 LOG NUMBER - (317-319)-116
SAMPLE DATE - 08/13/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 9/21/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
TUBY	FAMILY TUBIFICIDAE	32	44	22
NAID	FAMILY NAIDIDAE	0	4	3
ENCH	FAMILY ENCHYTRAEIDAE	0	0	1
NEMA	PHYLUM NEMATODA	0	1	0
CRIC	CRICOTOPUS VAN DER WULP	1	0	0
PHAE	PHAENOPSECTRA KIEFFER	1	2	0
ORTH	ORTHOCLADIUS VAN DER WULP	1	0	0

PROJECT NO. - 116 STATION NO. - 14 LOG NUMBER - (320-323)-116
SAMPLE DATE - 08/13/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 9/21/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
MUSC	FAMILY MISCIDAE	48	56	52
SIMU	SIMULIDAE LARVAE	1	2	0
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	0	0	1
ACII	ACARI	0	0	1
NEMA	PHYLUM NEMATODA	8	4	1
TUBY	FAMILY TUBIFICIDAE	396	*1168	227
ENCH	FAMILY ENCHYTRAEIDAE	0	15	7
BAET	BAETIS LEACH	0	0	1
CHPA	CHIRONOMINI NR. PARALAUTERBORNIELLA	0	8	0
CRIC	CRICOTOPUS VAN DER WULP	648	486	67
CARD	CARDIOCLADIUS KIEFFER	52	8	0
HTTR	HETEROTRISSOCLADIUS	4	8	4
THIE	THIENEMANNIELLA KIEFFER	4	0	1
POLY	POLYPEDILUM FALLAX GP.	12	0	7
MONO	MONODIAMESA KIEFFER	8	0	0
ORTH	ORTHOCLADIUS VAN DER WULP	8	10	0
THIE	THIENEMANNIELLA KIEFFER	14	0	0
PHAE	PHAENOPSECTRA KIEFFER	0	2	0
ORTA	ORTHOCLADINAE A	0	2	0

PROJECT NO. - 116 STATION NO. - 20 LOG NUMBER - (324-326)-116
SAMPLE DAT - 08/13/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 9/24/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
OLIG	CLASS OLIGOCHAETA	1	2	1
DOLI	FAMILY DOLICHOPODIDAE	1	0	0
PUPA	CHIRONOMIDAE PUPAE	35	3	19
MUSC	FAMILY MISCIDAE	0	0	1
SIMU	SIMULIDAE LARVAE	0	0	1
DERO	DERONECTES SHARP	2	0	0
HYDR	HYDROPORUS CLAIRVILLE	3	0	0
COLE	ORDER COLEOPTERA	1	2	1
PENT	PENTANEURINI	11	10	4
CRIC	CRICOTOPUS VAN DER WULP	32	7	11
TANS	TANYTARSUS VAN DER WULP	25	13	0
RHEO	RHEOTANYTARSUS BAIUSE	53	43	51
PACL	- SPECIES NOT ON MASTER LIST			
HTTR	HETEROTRISSOCLADIUS	8	2	0
CHSP	CHIRONOMUS MEIGEN	0	1	4
CHPA	CHIRONOMINI NR. PARALAUTERBORNIELLA	0	0	2

PROJECT NO. - 116 STATION NO. - 21 LOG NUMBER - (327-328)-116
SAMPLE DATE - 08/13/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 9/24/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIDAE LARVAE	80	30	35
PUPA	CHIRONOMIDAE PUPAE	7	7	23
PALP	PALPOMYIA GP. SPP. MEIGEN	1	2	3
MUSC	FAMILY MISCIDAE	0	1	1
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	0	1	0
CHOP	CHRYSOPS MEIGEN	0	0	1
EMPP	FAMILY EMPIDIDAE	0	0	1
COLE	ORDER COLEOPTERA	1	0	1
TUBY	FAMILY TUBIFICIDAE	6	5	11
EPHY	FAMILY EPHYDRIDAE	0	0	1
CRIC	CRICOTOPUS VAN DER WULP	111	42	15
MICR	MICROTENDIPES KIEFFER	12	1	0
PENT	PENTANEURINI	8	4	3
TANS	TANYTARSUS VAN DER WULP	1	0	0
RHEO	RHEOTANYTARSUS BAIUSE	7	3	11
CARD	CARDIOCLADIUS KIEFFER	2	0	0
HTTR	HETEROTRISSOCLADIUS	1	0	2
ORTH	ORTHOCLADIUS VAN DER WULP	8	0	0
CHSP	CHIRONOMUS MEIGEN	2	8	6
MICP	MICROPSECTRA KIEFFER	0	8	5

PROJECT NO. - 116 STATION NO. - 27 LOG NUMBER - (330-332)-116
SAMPLE DATE - 08/14/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 092179 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
TRIC	TRICORYTHODES ULMER	145	176	152
BAET	BAETIS LEACH	48	19	94
EPSP	EPHEMERELLA WALSH	2	2	0
EALB	EPHORON ALBUM SAY	2	1	0
TRAA	TRAVERELLA ALBERTANA MCDUNNOUGH	1	16	17
CHTP	CHOROTERPES EATON	22	44	106
RHIT	RHITHROGENA EATON	1	1	1
HEPP	HEPTAGENIA WALSH	4	8	23
TUBY	FAMILY TUBIFICIDAE	4	2	4
BRAS	BRACHYCENTRUS CURTIS	0	0	2
CHEU	CHEUMATOPSYCHE WALLENGREN	0	15	1
HYSP	HYDROPSYCHE PICTET	1	42	54
MATC	MAYATRICHIA ROSS	1	4	2
HYTL	HYDROPTILA DALMAN	0	1	4
LEPI	ORDER LEPIDOPTERA	0	2	1
PUPA	CHIRONOMIDAE PUPAE	1	6	4
DOLI	FAMILY DOLICHOPODIDAE	0	1	0
SIMU	SIMULIDAE LARVAE	0	1	0
OGMP	OPHIOGOMPHUS SELYS	0	1	1
CRIC	CRICOTOPUS VAN DER WULP	3	6	1
MICR	MICROTENDIPES KIEFFER	3	3	2
MICP	MICROPSECTRA KIEFFER	0	15	0
ENCR	ENDOCHIRONOMUS	0	2	0
POLS	POLYPEDILUM KIEFFER	0	1	2
PENT	PENTANEURINI	0	1	0
RHEO	RHEOTANYTARSUS BAIUSE	0	0	1

PROJECT NO. - 116 STATION NO. - 29 LOG NUMBER - (333-335)-116
SAMPLE DATE - 08/14/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 5/28/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
TUBY	FAMILY TUBIFICIDAE	1	4	1
TRAA	TRAVERELLA ALBERTANA MCDUNNOUGH	0	0	1
BAET	BAETIS LEACH	58	88	50
TRIC	TRICORYTHODES ULMER	35	12	64
CHTP	CHOROTERPES EATON	1	1	1
HEPP	HEPTAGENIA WALSH	0	1	1
RHIT	RHITHROGENA EATON	0	5	0
HYSP	HYDROPSYCHE PICTET	3	2	23
HYTL	HYDROPTILA DALMAN	1	0	0
MATC	MAYATRICHIA ROSS	0	0	3
SIMU	SIMULIDAE LARVAE	1	0	1
PUPA	CHIRONOMIDAE PUPAE	0	1	4
TIPS	HEXATOMA LATRETILLE	0	0	2
THIE	THIENEMANNIELLA KIEFFER	5	0	0
MICP	MICROPSECTRA KIEFFER	3	3	20
CRIC	CRICOTOPUS VAN DER WULP	1	1	0
POLS	POLYPEDILUM KIEFFER	2	2	5
MICR	MICROTENDIPES KIEFFER	0	0	1
CHPA	CHIRONOMINI NR. PARALAUTERBORNIELLA	0	0	1

OCTOBER

BENTHOS DATA SHEET
RIO BLANCO OIL SHALE COMPANY

PROJECT NO. - 116 STATION NO. - 13 LOG NUMBER - (394-396-116)
SAMPLE DATE - 10/8/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 10/31/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIDAE LARVAE	10	2	2
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	6	2	3
PUPA	CHIRONOMIDAE PUPAE	0	0	1
DIAF	SUBFAMILY DIAMESINAE	4	1	1
THIE	THIENEMANNIELLA KIEFFER	0	0	1
CRIC	CRICOTOPUS VAN DER WULP	0	0	1
TUBY	FAMILY TUBIFICIDAE	2	4	5
NAID	FAMILY NAIDIDAE	1	49	3
BAET	BAETIS LEACH	5	6	10
CAPN	FAMILY CAPNIDAE	46	55	30

PROJECT NO. - 116 STATION NO. - 14 LOG NUMBER - (397-400-116)
SAMPLE DATE - 10/8/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 10/31/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
MUSC	FAMILY MISCIDAE	228	0	108
SIMU	SIMULIDAE LARVAE	4	0	0
NAID	FAMILY NAIDIDAE	236	0	184
TUBY	FAMILY TUBIFICIDAE	476	428	164
NEMA	PHYLUM NEMATODA	24	0	9
BAET	BAETIS LEACH	0	4	4
CRIC	CRICOTOPUS VAN DER WULP	28	12	28
ENCR	ENDOCHIRONOMUS	4	84	0
ORTH	ORTHOCLADIUS VAN DER WULP	8	12	12
DIAM	DIAMESA MEIGEN	8	0	0
PROC	PROCLADIUS SKUSE	4	4	4
THIE	THIENEMANNIELLA KIEFFER	4	0	12
RHEO	RHEOTANYTARSUS BAIUSE	0	8	0
DIAF	SUBFAMILY DIAMESINAE	0	8	0

PROJECT NO. - 116 STATION NO. - 20 LOG NUMBER - (401-403-116)
SAMPLE DATE - 10/8/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 11/1/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIDAE LARVAE	34	24	52
MUSC	FAMILY MISCIDAE	2	3	1
PALP	PALPOMYIA GP. SPP. MEIGEN	1	2	1
PUPA	CHIRONOMIDAE PUPAE	52	78	56
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	19	1	4
TUBY	FAMILY TUBIFICIDAE	1	4	7
LACC	LACCOPHILUS LEACH	1	0	0
HYSP	HYDROPSYCHE PICTET	1	0	0
CHEU	CHEUMATOPSYCHE WALLENGREN	0	0	2
RHEO	RHEOTANYTARSUS BAIUSE	0	1	2
PENT	PENTANEURINI	2	9	0
CRIC	CRICOTOPUS VAN DER WULP	13	23	21
CARD	CARDIOCLADIUS KIEFFER	5	17	0
MICR	MICROTENDIPES KIEFFER	2	0	0
ORTA	ORTHOCLADINAE A	0	22	30

PROJECT NO. - 116 STATION NO. - 21 LOG NUMBER - (404-406-116)
SAMPLE DATE - 10/8/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 11/1/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIDAE LARVAE	67	68	41
PALP	PALPOMYIA GP. SPP. MEIGEN	3	12	3
PUPA	CHIRONOMIDAE PUPAE	8	16	18
DOLI	FAMILY DOLICHOPODIDAE	1	0	0
MUSC	FAMILY MISCIDAE	0	2	0
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	10	15	6
TABS	TABANUS LINNAEUS	0	1	0
LACC	LACCOPHILUS LEACH	1	0	0
TUBY	FAMILY TUBIFICIDAE	3	17	9
NAID	FAMILY NAIDIDAE	0	11	0
HYSP	HYDROPSYCHE PICTET	2	1	0
CHEU	CHEUMATOPSYCHE WALLENGREN	0	0	1
PENT	PENTANEURINI	3	1	2
CRIC	CRICOTOPUS VAN DER WULP	2	0	1
ORTA	ORTHOCLADINAE A	16	18	14
MICP	MICROPSECTRA KIEFFER	0	2	0
TANS	TANYTARSUS VAN DER WULP	0	1	1
EUKI	EUKIEFFERIELLA THIENEMANN	0	0	1

PROJECT NO. - 116 STATION NO. - 27 LOG NUMBER - (409-411-116)
SAMPLE DATE - 10/9/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 11/1/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
TRIC	TRICORYTHODES ULMER	19	2	2
EPSP	EPHEMERELLA WALSH	15	2	18
CHIP	CHOROTERPES EATON	1	0	1
BAET	BAETIS LEACH	3	2	7
HEPP	HEPTAGENIA WALSH	5	0	1
BRAS	BRACHYCENTRUS CURTIS	1	0	7
HYSP	HYDROPSYCHE PICTET	0	0	8
CHEU	CHEUMATOPSYCHE WALLENGREN	0	0	3
CORX	FAMILY CORIXIDAE	1	0	0
OLIG	CLASS OLIGOCHAETA	9	152	24
NAID	FAMILY NAIDIDAE	10	0	0
CAPN	FAMILY CAPNIDAE	2	0	3
PUPA	CHIRONOMIDAE PUPAE	5	2	1
PALP	PALPOMYIA GP. SPP. MEIGEN	0	0	4
PENT	PENTANEURINI	4	0	1
CRIC	CRICOTOPUS VAN DER WULP	34	10	26
MICR	MICROTENDIPES KIEFFER	15	9	23
POLS	POLYPEDILUM KIEFFER	14	18	6
PHAE	PHAENOPSECTRA KIEFFER	7	9	0
TANS	TANYTARSUS VAN DER WULP	3	0	0
PSEC	PSECTROCLADIUS	0	1	0
TOCL	TRICHOCLADIUS	0	1	1
ORTH	ORTHOCLADIUS VAN DER WULP	0	2	0
CHSP	CHIRONOMUS MEIGEN	0	1	1

PROJECT NO. - 116 STATION NO. - 29 LOG NUMBER - (410-412-116)
SAMPLE DATE - 10/9/79 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 11/1/79 SAMPLES ANALYZED BY - AMES
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
TIPS	HEXATOMA LATREILLE	3	0	2
SIMU	SIMULIDAE LARVAE	1	0	0
PUPA	CHIRONOMIDAE PUPAE	5	9	10
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	0	0	1
EPSP	EPHEMERELLA WALSH	77	24	3
BAET	BAETIS LEACH	45	24	31
TRIC	TRICORYTHODES ULMER	10	5	2
HEPP	HEPTAGENIA WALSH	131	74	145
PYRA	FAMILY PYRALIDAE	1	1	1
NAID	FAMILY NAIDIDAE	7	7	6
TUBY	FAMILY TUBIFICIDAE	11	9	6
PRTL	PROTOPTILA ROSS	1	0	3
HYSP	HYDROPSYCHE PICTET	36	28	32
CHEU	CHEUMATOPSYCHE WALLENGREN	12	6	18
CHLO	FAMILY CHLOROPERLIDAE	5	3	3
CAPN	FAMILY CAPNIDAE	1	1	1
ISOG	ISOGENOIDES KLAPALEK	0	0	4
POLS	POLYPEDILUM KIEFFER	5	3	15
CRIC	CRICOTOPUS VAN DER WULP	8	9	15
ORTA	ORTHOCLADINAE A	5	2	0
DIAE	SUBFAMILY DIAMESINAE	5	7	15
MICR	MICROTENDIPES KIEFFER	2	0	0
ORTH	ORTHOCLADIUS VAN DER WULP	1	0	0
CHCR	CHIRONOMUS	5	2	3
RHEO	RHEOTANYTARSUS BAIUSE	0	2	0
PHAE	PHAENOPSECTRA KIEFFER	0	0	1

APPENDIX 4-10

Macroinvertebrate Density and Species Diversity Calculations
for all Stations by Sampling Date for 1979

APRIL

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 04/25/79

STATION NUMBER - 13
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM NEMATODA	18.1	.0	.0	6.0	10.4	6.7
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY ENCHYTRAEIDAE	18.1	.0	.0	6.0	10.4	6.7
FAMILY TUBIFICIDAE	.0	.0	36.1	12.0	20.8	13.3
FAMILY NAIDIDAE	.0	18.1	54.2	24.1	27.6	26.7
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLLEMBOLA	18.1	.0	.0	6.0	10.4	6.7
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE						
DIAMESA MEIGEN	.0	18.1	18.1	12.0	10.4	13.3
SUBFAMILY ORTHOCLADIINAE						
ORTHOCLADINAE B	18.1	.0	18.1	12.0	10.4	13.3
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	18.1	.0	.0	6.0	10.4	6.7
FAMILY DOLICHOPODIDAE	.0	18.1	.0	6.0	10.4	6.7
TOTAL	90.3	54.2	126.4	90.3		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	18.1	.0	.0	6.0	10.4	6.7
CLASS OLIGOCHAETA	18.1	18.1	90.3	42.1	41.7	46.7
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	36.1	18.1	36.1	30.1	10.4	33.3

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 2.061
VARIANCE - .0032
MAXIMUM INDEX - 2.197
EVENNESS - .938
NO OF SPECIES - 9

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 04/25/79

STATION NUMBER - 14
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM NEMATODA	18.1	.0	.0	6.0	10.4	.3
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA	18.1	18.1	.0	12.0	10.4	.6
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	938.6	1263.5	2130.0	1444.0	615.8	66.7
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	18.1	18.1	.0	12.0	10.4	.6
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	.0	18.1	.0	6.0	10.4	.3
ORDER TRICHOPTERA						
FAMILY HYDROPTILIDAE						
OCHROTRICHIA ROSS	36.1	18.1	18.1	24.1	10.4	1.1
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE	.0	.0	18.1	6.0	10.4	.3
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	.0	.0	18.1	6.0	10.4	.3
PROCLADIUS SKUSE	.0	36.1	.0	12.0	20.8	.6
SUBFAMILY DIAMESINAE						
DIAMESA MEIGEN	18.1	18.1	18.1	18.1	.0	.8
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	180.5	198.6	108.3	162.5	47.8	7.5
ORTHOCLADIUS VAN DER WULP	.0	36.1	.0	12.0	20.8	.6
ORTHOCLADINAE B	18.1	.0	.0	6.0	10.4	.3
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CRYPTOCHIRONOMUS KIEFFER	18.1	.0	54.2	24.1	27.6	1.1
POLYPEDILUM FALLAX GP.	36.1	36.1	18.1	30.1	10.4	1.4
STICTOCHIRONOMUS	.0	.0	18.1	6.0	10.4	.3
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	18.1	252.7	252.7	174.5	135.5	8.1
CHIRONOMIDAE PUPAE	126.4	162.5	252.7	180.5	65.1	8.3
FAMILY CULICIDAE	.0	18.1	.0	6.0	10.4	.3
SIMULIDAE LARVAE	.0	54.2	.0	18.1	31.3	.8
TOTAL	1444.0	2148.0	2906.1	2166.1		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	18.1	.0	.0	6.0	10.4	.3
CLASS OLIGOCHAETA	956.7	1281.6	2130.0	1456.1	605.8	67.2
ORDER EPHEMEROPTERA	18.1	36.1	.0	18.1	18.1	.8
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	36.1	18.1	18.1	24.1	10.4	1.1
FAMILY CHIRONOMIDAE	415.2	740.1	740.1	631.8	187.6	29.2

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.344
VARIANCE - .0[illegible]
MAXIMUM INDEX - 2.996
EVENNESS - .449
NO OF SPECIES - 2[illegible]

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RMOSC AQUATIC STUDIES
SAMPLE DATE: 4/25/79

STATION NUMBER - 26
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXICA						
FAMILY TUBIFICIDAE	.0	.0	18.1	6.0	10.4	1.2
FAMILY NAIDIDAE	18.1	.0	.0	6.0	10.4	1.2
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE						
DIAMESA MEIGEN	162.5	90.3	72.2	108.3	47.8	21.7
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	18.1	270.8	54.2	114.3	136.7	22.9
ORTHOCLADIUS VAN DER WULP	.0	72.2	90.3	54.2	47.8	10.8
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	54.2	180.5	144.4	126.4	65.1	25.3
SIMULIDAE LARVAE	108.3	90.3	54.2	84.2	27.6	16.9
TOTAL	361.0	704.0	433.2	499.4		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	18.1	.0	18.1	12.0	10.4	2.4
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	234.7	613.7	361.0	403.1	193.0	80.7

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.664
VARIANCE - .0005
MAXIMUM INDEX - 1.946
EVENNESS - .855
NO OF SPECIES - 7

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 04/25/79

STATION NUMBER - 21
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	.0	18.1	.0	6.0	10.4	2.4
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	36.1	36.1	.0	24.1	20.8	9.5
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	18.1	18.1	.0	12.0	10.4	4.8
SUBFAMILY DIAMESINAE						
DIAMESA MEIGEN	90.3	54.2	.0	48.1	45.4	19.0
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	72.2	180.5	.0	84.2	90.9	33.3
ORTHOCLADIUS VAN DER WULP	.0	.0	18.1	6.0	10.4	2.4
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	18.1	72.2	36.1	42.1	27.6	16.7
SIMULIDAE LARVAE	.0	54.2	36.1	30.1	27.6	11.9
TOTAL	234.7	433.2	90.3	252.7		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	18.1	.0	6.0	10.4	2.4
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	198.6	324.9	54.2	192.5	135.5	76.2

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.781
VARIANCE - .0018
MAXIMUM INDEX - 2.079
EVENNESS - .856
NO OF SPECIES - 8

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 04/26/79

STATION NUMBER - 27
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	136.5	155.9	19.5	104.0	73.8	15.8
FAMILY NAIDIDAE	.0	.0	19.5	6.5	11.3	1.
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	78.0	39.0	.0	39.0	39.0	5.9
FAMILY HEPTAGENIIDAE						
RHITHROGENA EATON	155.9	19.5	.0	58.5	85.0	8.9
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	623.8	428.8	.0	350.9	319.1	53.5
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	117.0	78.0	.0	65.0	59.6	9.9
ORDER ODONATA (ANISOPTERA)	19.5	.0	.0	6.5	11.3	1.
ORDER PLECOPTERA						
FAMILY PERLODIDAE						
ISOPERLA BANKS	39.0	.0	.0	13.0	22.5	2.0
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	.0	19.5	.0	6.5	11.3	1.
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
MICROTENDIPES KIEFFER	19.5	.0	.0	6.5	11.3	1.
TOTAL	1189.1	740.7	39.0	656.3		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	136.5	155.9	39.0	110.5	62.7	16.8
ORDER EPHEMEROPTERA	974.7	565.3	.0	513.3	489.4	78.2
ORDER ODONATA	19.5	.0	.0	6.5	11.3	1.
ORDER PLECOPTERA	39.0	.0	.0	13.0	22.5	2.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	19.5	19.5	.0	13.0	11.3	2.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.499
VARIANCE - .0218
MAXIMUM INDEX - 2.303
EVENNESS - .651
NO OF SPECIES - 10

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 04/26/79

STATION NUMBER - 29
NUMBER OF REPITITIONS = 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM NEMATODA	.0	.0	19.5	6.5	11.3	.7
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	97.5	760.2	19.5	292.4	407.0	29.4
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	175.4	39.0	58.5	91.0	73.8	9.2
FAMILY HEPTAGENIIDAE						
RHITHROGENA EATON	214.4	311.9	350.9	292.4	70.3	29.4
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	565.3	39.0	97.5	233.9	288.5	23.5
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	19.5	.0	.0	6.5	11.3	.7
ORDER PLECOPTERA						
FAMILY PERLODIDAE						
ISOPERLA BANKS	97.5	19.5	.0	39.0	51.6	3.9
ISOGENOIDES KLAPALEK	19.5	.0	.0	6.5	11.3	.7
CLAASSENIA SABLUOSA BANKS	.0	19.5	.0	6.5	11.3	.7
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	19.5	.0	.0	6.5	11.3	.7
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
PARACLADOPELMA HARRISCH	.0	19.5	.0	6.5	11.3	.7
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	19.5	.0	.0	6.5	11.3	.7
TOTAL	1228.1	1208.6	545.8	994.2		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	19.5	6.5	11.3	.7
CLASS OLIGOCHAETA	97.5	760.2	19.5	292.4	407.0	29.4
ORDER EPHEMEROPTERA	974.7	389.9	506.8	623.8	309.4	62.7
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	117.0	39.0	.0	52.0	59.6	5.2
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	39.0	19.5	.0	19.5	19.5	2.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.636
VARIANCE - .0008
MAXIMUM INDEX - 2.485
EVENNESS - .658
NO OF SPECIES - 12

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BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
ROOSC AQUATIC STUDIES
SAMPLE DATE: 52379

STATION NUMBER - 13
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	72.2	.0	54.2	42.1	37.6	46.7
FAMILY NAIDIDAE	36.1	.0	72.2	36.1	36.1	40.0
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	18.1	.0	.0	6.0	10.4	6.7
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	18.1	.0	.0	6.0	10.4	6.7
TOTAL	144.4	.0	126.4	90.3		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	108.3	.0	126.4	78.2	68.3	86.7
ORDER EPHEMEROPTERA	36.1	.0	.0	12.0	20.8	13.3
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.083
VARIANCE - .0046
MAXIMUM INDEX - 1.386
EVENNESS - .781
NO OF SPECIES - 4

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 052379

STATION NUMBER - 14
NUMBER OF REPITITIONS = 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM NEMATODA	.0	18.1	180.5	66.2	99.4	.9
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA	4801.4	2093.9	12418.8	6438.0	5353.5	91.1
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
CALLIBAETIS EATON	.0	36.1	.0	12.0	20.8	.2
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	.0	180.5	18.1	66.2	99.4	.9
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE						
DIAMESA MEIGEN	.0	18.1	.0	6.0	10.4	.1
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	72.2	1010.8	72.2	385.1	541.9	5.4
ORTHOCLADIUS VAN DER WULP	.0	18.1	.0	6.0	10.4	.1
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CRYPTOCHIRONOMUS KIEFFER	.0	.0	18.1	6.0	10.4	.1
POLYPEDILUM FALLAX GP.	.0	36.1	.0	12.0	20.8	.2
STICTOCHIRONOMUS	.0	.0	18.1	6.0	10.4	.1
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	72.2	.0	108.3	60.2	55.1	.9
CHIRONOMIDAE PUPAE	.0	18.1	.0	6.0	10.4	.1
TOTAL	4945.8	3429.6	12833.9	7069.8		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	18.1	180.5	66.2	99.4	.9
CLASS OLIGOCHAETA	4801.4	2093.9	12418.8	6438.0	5353.5	91.1
ORDER EPHEMEROPTERA	.0	36.1	.0	12.0	20.8	.2
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	144.4	1101.1	216.5	487.4	532.7	6.9

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - .424
VARIANCE - .[illegible]
MAXIMUM INDEX - 2.485
EVENNESS - .17
NO OF SPECIES - 12

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 052379

STATION NUMBER - 20
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (N/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	18.1	.0	18.1	12.0	10.4	.5
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	36.1	36.1	.0	24.1	20.8	1.0
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	18.1	.0	.0	6.0	10.4	.3
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
HYDROPORUS CLAIRVILLE	.0	.0	18.1	6.0	10.4	.3
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	36.1	.0	.0	12.0	20.8	.5
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	.0	.0	469.3	156.4	271.0	6.8
ORTHOCLADIUS VAN DER WULP	740.1	397.1	90.3	409.1	325.1	17.8
ORTHOCLADINAE A	722.0	487.4	740.1	649.8	141.0	28.3
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
TRIBELOS	18.1	.0	.0	6.0	10.4	.3
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	18.1	.0	.0	6.0	10.4	.3
CHIRONOMIDAE PUPAE	631.8	920.6	559.6	704.0	191.0	30.7
FAMILY DOLICHOPODIDAE	18.1	.0	.0	6.0	10.4	.3
SIMULIDAE LARVAE	270.8	415.2	198.6	294.8	110.3	12.9
TOTAL	2527.1	2256.3	2093.9	2292.4		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	18.1	.0	18.1	12.0	10.4	.5
ORDER EPHEMEROPTERA	54.2	36.1	.0	30.1	27.6	1.3
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	18.1	6.0	10.4	.3
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	2166.1	1805.1	1859.2	1943.4	194.7	84.8

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.655
VARIANCE - .0053
MAXIMUM INDEX - 2.565
EVENNESS - .645
NO OF SPECIES - 13

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 5257?

STATION NUMBER - 01
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	54.2	.0	36.1	30.1	27.6	2.2
FAMILY NAIDIDAE	.0	72.2	.0	24.1	41.7	1.7
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
DERONECTES SHARP	18.1	18.1	.0	12.0	10.4	.9
HYDROPORUS CLAIRVILLE	.0	72.2	18.1	30.1	37.6	2.2
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	18.1	.0	.0	6.0	10.4	.4
ORTHOCLADIUS VAN DER WULP	1137.2	505.4	252.7	631.8	455.6	45.3
ORTHOCLADINAE B	144.4	162.5	54.2	120.3	58.0	8.6
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	794.2	415.2	379.1	529.5	230.0	37.9
SIMULIDAE LARVAE	.0	36.1	.0	12.0	20.8	.9
TOTAL	2166.1	1281.6	740.1	1395.9		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	54.2	72.2	36.1	54.2	18.1	3.9
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	18.1	90.3	18.1	42.1	41.7	3.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	2093.9	1083.0	685.9	1287.6	725.9	92.2

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.279
VARIANCE - .0007
MAXIMUM INDEX - 2.197
EVENNESS - .582
NO OF SPECIES - 9

JUNE

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RUCSC AQUATIC STUDIES
SAMPLE DATE: 06/20/79

STATION NUMBER - 13
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	144.4	270.8	72.2	162.5	100.5	90.0
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE						
DIAMESA MEIGEN	18.1	.0	.0	6.0	10.4	3.3
SUBFAMILY ORTHOCLADIINAE						
CRICOTOPUS VAN DER WULP	.0	18.1	.0	6.0	10.4	3.3
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
SIMULIDAE LARVAE	.0	18.1	.0	6.0	10.4	3.3
TOTAL	162.5	306.9	72.2	180.5		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	144.4	270.8	72.2	162.5	100.5	90.0
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	18.1	18.1	.0	12.0	10.4	6.7

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - .435
VARIANCE - .0054
MAXIMUM INDEX - 1.386
EVENNESS - .314
NO OF SPECIES - 4

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 06/21/79

STATION NUMBER - 14
NUMBER OF REPITITIONS = 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM NEMATODA	.0	18.1	18.1	12.0	10.4	.2
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	252.7	270.8	234.7	252.7	18.1	4.1
FAMILY NAIOIDAE	2743.7	3158.8	4332.1	3411.6	823.8	55.9
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA						
FAMILY HYDROPHILIDAE	18.1	.0	.0	6.0	10.4	.1
FAMILY DYTISCIDAE						
AGABUS LEACH	18.1	54.2	36.1	36.1	18.1	.6
HYDROPORUS CLAIRVILLE	18.1	.0	.0	6.0	10.4	.1
ORDER TRICHOPTERA						
FAMILY HYDROPTILIDAE	.0	.0	18.1	6.0	10.4	.1
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	18.1	54.2	18.1	30.1	20.8	.5
SUBFAMILY DIAMESINAE						
DIAMESA MEIGEN	.0	.0	72.2	24.1	41.7	.4
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	1534.3	1696.8	1137.2	1456.1	287.9	23.8
CRICOTOPUS VAN DER WULP	1083.0	.0	.0	361.0	625.3	5.9
ORTHOCLADIUS VAN DER WULP	18.1	18.1	18.1	18.1	.0	.3
THIENEMANNIELLA KIEFFER	36.1	.0	.0	12.0	20.8	.2
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CHIRONOMINI NR. PARALAUTERBORNIELL	36.1	36.1	.0	24.1	20.8	.4
HETEROTRISSOCLADIUS	72.2	126.4	397.1	198.6	174.1	3.3
MICROTENDIPES KIEFFER	.0	72.2	18.1	30.1	37.6	.5
STEMPELLINA	72.2	.0	.0	24.1	41.7	.4
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	.0	.0	54.2	18.1	31.3	.3
RHEOTANYTARSUS BAIUSE	90.3	.0	.0	30.1	52.1	.5
CHIRONOMIDAE PUPAE	144.4	18.1	90.3	84.2	63.4	1.4
SIMULIDAE LARVAE	18.1	36.1	126.4	60.2	58.0	1.
FAMILY MISCIDAE	.0	.0	18.1	6.0	10.4	.1
TOTAL	6173.3	5559.6	6588.4	6107.1		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	18.1	18.1	12.0	10.4	.2
CLASS OLIGOCHAETA	2996.4	3429.6	4566.8	3664.3	811.1	60.0
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	54.2	54.2	36.1	48.1	10.4	.8
ORDER TRICHOPTERA	.0	.0	18.1	6.0	10.4	.1
FAMILY CHIRONOMIDAE	3104.7	2021.7	1805.1	2310.5	696.3	37.8

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.443
VARIANCE = .0003
MAXIMUM INDEX = 3.091
EVENNESS = .467
NO OF SPECIES =

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 6/21/79

STATION NUMBER - 20
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
AGABUS LEACH	18.1	.0	.0	6.0	10.4	.6
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	72.2	144.4	234.7	150.4	81.4	14.2
CRICOTOPUS VAN DER WULP	18.1	18.1	54.2	30.1	20.8	2.8
EUKIEFFERIELLA THIENEMANN	72.2	90.3	.0	54.2	47.8	5.1
ORTHOCLADIUS VAN DER WULP	18.1	.0	.0	6.0	10.4	.6
ORTHOCLADINAE A	36.1	.0	.0	12.0	20.8	1.1
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	270.8	379.1	216.6	288.8	82.7	27.3
FAMILY DOLICHOPODIDAE	36.1	.0	54.2	30.1	27.6	2.8
SIMULIUM ARCTICUM MALLOCH (PUPAE)	54.2	72.2	.0	42.1	37.6	4.0
SIMULIDAE LARVAE	361.0	649.8	306.9	439.2	184.4	41.5
TOTAL	956.7	1353.8	866.4	1059.0		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	.0	.0	.0	.0	.0
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	18.1	.0	.0	6.0	10.4	.6
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	487.4	631.8	505.4	541.5	78.7	51.1

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.589
VARIANCE - .0009
MAXIMUM INDEX - 2.303
EVENNESS - .690
NO OF SPECIES - 10

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RMOSC AQUATIC STUDIES
SAMPLE DATE: 6/21/79

STATION NUMBER - 21
NUMBER OF REPLITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA						
FAMILY HYDROPHILIDAE	18.1	.0	.0	6.0	10.4	.7
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE						
DIAMESA MEIGEN	.0	18.1	.0	6.0	10.4	.7
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	.0	.0	54.2	18.1	31.3	2.0
CRICOTOPUS VAN DER WULP	523.5	216.6	234.7	324.9	172.2	36.7
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	90.3	306.9	90.3	162.5	125.1	18.4
SIMULIUM ARCTICUM MALLOCH (PUPAE)	18.1	108.3	36.1	54.2	47.8	6.1
SIMULIDAE LARVAE	379.1	415.2	144.4	312.9	147.0	35.4
TOTAL	1028.9	1065.0	559.6	884.5		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	.0	.0	.0	.0	.0
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	18.1	.0	.0	6.0	10.4	.7
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	613.7	541.5	379.1	511.4	120.2	57.8

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.365
VARIANCE = .0006
MAXIMUM INDEX = 1.946
EVENNESS = .702
NO OF SPECIES = 7

JULY

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 07/19/79

STATION NUMBER - 13
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	180.5	198.6	72.2	150.4	68.3	49.0
FAMILY NAIDIDAE	180.5	108.3	108.3	132.4	41.7	43.1
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE						
DIAMESA MEIGEN	18.1	.0	.0	6.0	10.4	2.0
SUBFAMILY ORTHOCLADIINAE						
ORTHOCLADIUS VAN DER WULP	18.1	.0	.0	6.0	10.4	2.0
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
FAMILY EPHYDRIDAE	.0	18.1	.0	6.0	10.4	2.0
SIMULIDAE LARVAE	.0	.0	18.1	6.0	10.4	2.0
TOTAL	397.1	324.9	198.6	306.9		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	361.0	306.9	180.5	282.8	92.6	92.2
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	36.1	.0	.0	12.0	20.8	3.9

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.021
VARIANCE = .0024
MAXIMUM INDEX = 1.792
EVENNESS = .57
NO OF SPECIES = 6

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 07/19/79

STATION NUMBER - 14
NUMBER OF REPITITIONS = 3.

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM NEMATODA	144.4	.0	.0	48.1	83.4	.4
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY ENCHYTRAEIDAE	974.7	4981.9	613.7	2190.1	2424.5	19.8
FAMILY TUBIFICIDAE	1010.8	7599.3	5090.3	4566.8	3325.3	41.3
FAMILY NAIDIDAE	306.9	1534.3	956.7	932.6	614.1	8.4
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	72.2	36.1	126.4	78.2	45.4	.7
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	18.1	.0	.0	6.0	10.4	.1
CHEUMATOPSYCHE WALLENGREN	18.1	.0	.0	6.0	10.4	.1
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	18.1	.0	18.1	12.0	10.4	.1
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	541.5	36.1	108.3	228.6	273.4	2.1
CRICOTOPUS VAN DER WULP	433.2	180.5	216.6	276.8	136.7	2.5
ORTHOCLADIUS VAN DER WULP	2870.0	866.4	1552.3	1762.9	1018.3	15.9
THIENEMANNIELLA KIEFFER	36.1	36.1	90.3	54.2	31.3	.5
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	54.2	18.1	.0	24.1	27.6	.2
FAMILY EPHYDRIDAE	.0	.0	18.1	6.0	10.4	.1
SIMULIUM ARCTICUM MALLOCH (PUPAE)	18.1	36.1	.0	18.1	18.1	.2
SIMULIDAE LARVAE	144.4	451.3	649.8	415.2	254.6	3.8
FAMILY MISCIDAE	505.4	324.9	505.4	445.2	104.2	4.0
TOTAL	7166.1	16101.1	9945.8	11071.0		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	144.4	.0	.0	48.1	83.4	.4
CLASS OLIGOCHAETA	2292.4	14115.5	6660.6	7689.5	5978.3	69.5
ORDER EPHEMEROPTERA	72.2	36.1	126.4	78.2	45.4	.7
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	36.1	.0	.0	12.0	20.8	.1
FAMILY CHIRONOMIDAE	3935.0	1137.2	1967.5	2346.6	1436.9	21.2

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.740
VARIANCE = .0001
MAXIMUM INDEX = 2.833
EVENNESS = .614
NO OF SPECIES = 17

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 07/18/79

STATION NUMBER - 20
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	.0	.0	36.1	12.0	20.8	.4
FAMILY NAIDIDAE						
PHYLUM ARTHROPODA						
ACARI	.0	.0	18.1	6.0	10.4	.2
CLASS INSECTA						
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
AGABUS LEACH	18.1	.0	.0	6.0	10.4	.2
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	.0	18.1	36.1	18.1	18.1	.7
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	18.1	54.2	.0	24.1	27.6	.9
SUBFAMILY DIAMESINAE						
PSEUDODIAMESA	18.1	.0	.0	6.0	10.4	.2
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	54.2	126.4	180.5	120.3	63.4	4.4
CRICOTOPUS VAN DER WULP	.0	108.3	72.2	60.2	55.1	2.2
ORTHOCLADIUS VAN DER WULP	.0	18.1	18.1	12.0	10.4	.4
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CHIRONOMINI NR. PARALAUTERBORNIELL	.0	18.1	.0	6.0	10.4	.2
TRIBE TANYTARSINI						
TANYTARSUS VAN DER WULP	18.1	.0	18.1	12.0	10.4	.4
CHIRONOMIDAE PUPAE	36.1	36.1	72.2	48.1	20.8	1.8
SIMULIUM ARCTICUM MALLOCH (PUPAE)	18.1	108.3	72.2	66.2	45.4	2.4
SIMULIDAE LARVAE	415.2	3447.7	2978.3	2280.4	1632.3	83.7
FAMILY MISCIDAE	.0	18.1	72.2	30.1	37.6	1.1
FAMILY TABANIDAE	.0	18.1	36.1	18.1	18.1	.7
TOTAL	595.7	3971.1	3610.1	2725.6		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	.0	36.1	12.0	20.8	.4
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	18.1	.0	.0	6.0	10.4	.2
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	144.4	361.0	361.0	288.8	125.1	10.6

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - .817
VARIANCE - .0008
MAXIMUM INDEX - 2.773
EVENNESS - .294
NO OF SPECIES - 16

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RROSC AQUATIC STUDIES
SAMPLE DATE: 07/18/79

STATION NUMBER - 31
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	18.1	18.1	.0	12.0	10.4	.4
FAMILY NAIDIDAE						
PHYLUM ARTHROPODA						
ACARI	18.1	.0	.0	6.0	10.4	.2
CLASS INSECTA						
ORDER COLEOPTERA	.0	36.1	.0	12.0	20.8	.4
FAMILY DYTISCIDAE						
AGABUS LEACH	18.1	18.1	.0	12.0	10.4	.4
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	36.1	.0	18.1	18.1	18.1	.5
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	18.1	.0	.0	6.0	10.4	.2
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	126.4	198.6	126.4	150.4	41.7	4.5
CRICOTOPUS VAN DER WULP	252.7	758.1	595.7	535.5	258.0	16.1
ORTHOCLADIUS VAN DER WULP	.0	72.2	180.5	84.2	90.9	2.5
THIENEMANNIELLA KIEFFER	36.1	.0	.0	12.0	20.8	.4
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
STEMPELLINA	72.2	.0	.0	24.1	41.7	.7
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	270.8	108.3	90.3	156.4	99.4	4.7
FAMILY DOLICHOPODIDAE	.0	18.1	.0	6.0	10.4	.2
SIMULIUM ARCTICUM MALLOCH (PUPAE)	180.5	198.6	18.1	132.4	99.4	4.0
SIMULIDAE LARVAE	1769.0	3556.0	1155.2	2160.0	1247.2	64.9
TOTAL	2815.9	4981.9	2184.1	3327.3		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	18.1	18.1	.0	12.0	10.4	.4
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	18.1	54.2	.0	24.1	27.6	.7
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	776.2	1137.2	992.8	968.7	181.7	29.1

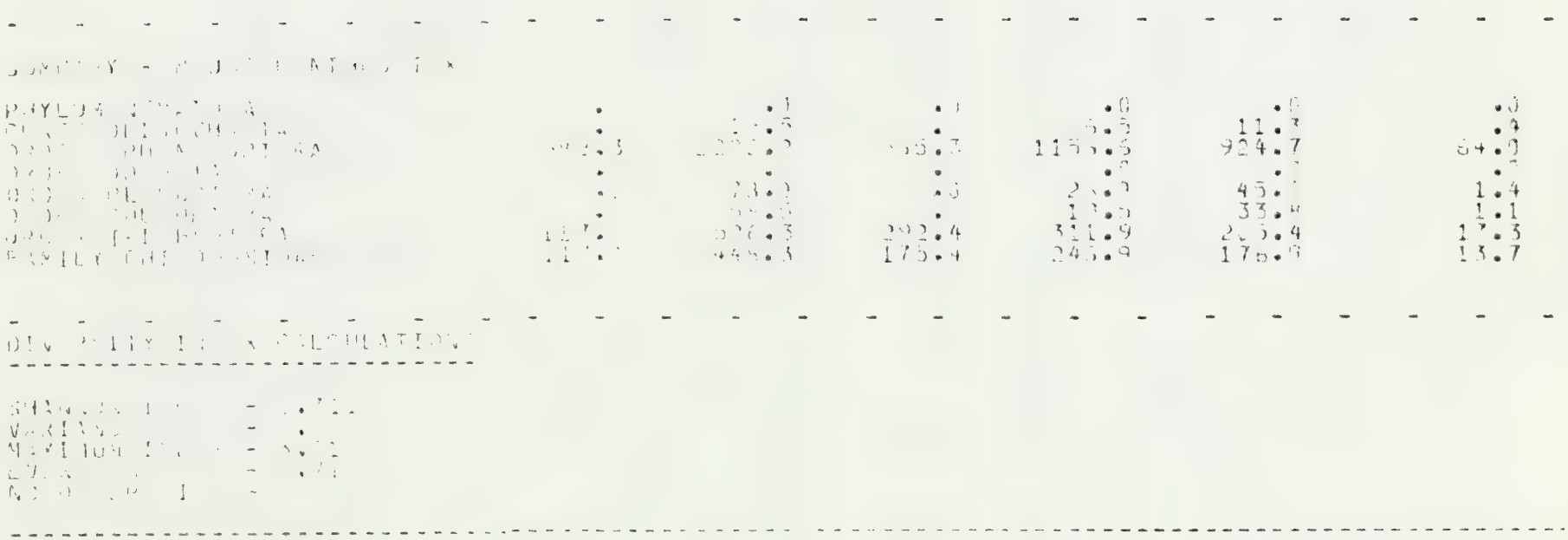
DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.259
VARIANCE - .0065
MAXIMUM INDEX - 2.708
EVENNESS - .465
NO OF SPECIES - 15

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 07/18/79

STATION NUMBER - 27
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA	.0	19.5	.0	6.5	11.3	.4
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	448.3	1189.1	233.9	623.8	501.2	34.5
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH	97.5	370.4	175.4	214.4	140.6	11.9
RHITHROGENA EATON	.0	58.5	.0	19.5	33.8	1.1
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	136.5	487.3	39.0	220.9	235.8	12.2
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	.0	117.0	117.0	78.0	67.5	4.3
ORDER PLECOPTERA						
FAMILY PERLODIDAE						
ISOPERLA BANKS	.0	39.0	.0	13.0	22.5	.7
ISOGENOIDES KLAPALEK	.0	39.0	.0	13.0	22.5	.7
ORDER COLEOPTERA						
FAMILY ELMIDAE						
STENELMIS DUFOUR	.0	58.5	.0	19.5	33.8	1.1
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS	39.0	214.4	.0	84.5	114.2	4.7
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	58.5	253.4	175.4	162.4	98.1	9.0
CHEUMATOPSYCHE WALLENGREN	19.5	39.0	117.0	58.5	51.6	3.2
FAMILY HYDROPTILIDAE						
HYDROPTILA DALMAN	.0	19.5	.0	6.5	11.3	.4
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	.0	19.5	.0	6.5	11.3	.4
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	.0	19.5	.0	6.5	11.3	.4
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	19.5	78.0	.0	32.5	40.6	1.8
CRICOTOPUS VAN DER WULP	78.0	.0	19.5	32.5	40.6	1.8
EUKIEFFERIELLA THIENEMANN	19.5	19.5	.0	13.0	11.3	.7
ORTHOCLADIUS VAN DER WULP	.0	194.9	97.5	97.5	97.5	5.4
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
POLYPEDILUM KIEFFER	.0	39.0	.0	13.0	22.5	.7
TRIBE TANYTARSINI						
RHEOTANYTARSUS BAUSE	.0	19.5	.0	6.5	11.3	.4
CHIRONOMIDAE PUPAE	.0	78.0	58.5	45.5	40.6	2.5
FAMILY EMPIDIDAE	.0	19.5	.0	6.5	11.3	.4
SIMULIDAE LARVAE	.0	39.0	.0	13.0	22.5	.7
HEXATOMA LATRETILLE	.0	39.0	.0	13.0	22.5	.7
TOTAL	916.2	3469.8	1033.1	1806.4		100.0



BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 7/18/79

STATION NUMBER - 29
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA	58.5	.0	.0	19.5	33.8	1.7
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	194.9	604.3	78.0	292.4	276.4	24.9
FAMILY HEPTAGENIIDAE						
RHITHROGENA EATON	857.7	604.3	448.3	636.8	206.6	54.1
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	.0	.0	19.5	6.5	11.3	.6
ORDER PLECOPTERA						
FAMILY PERLODIDAE						
ISOPERLA BANKS	19.5	.0	.0	6.5	11.3	.6
ISOGENOIDES KLAPALEK	.0	.0	39.0	13.0	22.5	1.1
ORDER COLEOPTERA						
FAMILY ELMIDAE						
STENELMIS DUFOUR	19.5	.0	.0	6.5	11.3	.6
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	97.5	.0	.0	32.5	56.3	2.8
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	.0	.0	19.5	6.5	11.3	.6
CRICOTOPUS VAN DER WULP	.0	19.5	39.0	19.5	19.5	1.7
ORTHOCLADIUS VAN DER WULP	.0	39.0	.0	13.0	22.5	1.1
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI	.0	.0	19.5	6.5	11.3	.6
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	19.5	39.0	.0	19.5	19.5	1.7
SIMULIDAE LARVAE	58.5	214.4	.0	91.0	110.8	7.7
HEXATOMA LATRETILLE	.0	.0	19.5	6.5	11.3	.6
TOTAL	1325.5	1520.5	682.3	1176.1		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	58.5	.0	.0	19.5	33.8	1.7
ORDER EPHEMEROPTERA	1052.6	1208.6	545.8	935.7	346.5	79.6
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	19.5	.0	39.0	19.5	19.5	1.7
ORDER COLEOPTERA	19.5	.0	.0	6.5	11.3	.6
ORDER TRICHOPTERA	97.5	.0	.0	32.5	56.3	2.9
FAMILY CHIRONOMIDAE	19.5	97.5	78.0	65.0	40.6	5.5

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.451
VARIANCE - .0014
MAXIMUM INDEX - 2.708
EVENNESS - .536
NO OF SPECIES - 15

AUGUST

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RMOSC AQUATIC STUDIES
SAMPLE DATE: 08/13/79

STATION NUMBER - 13
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM NEMATODA	.0	18.1	.0	6.0	10.4	.9
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY ENCHYTRAEIDAE	.0	.0	18.1	6.0	10.4	.9
FAMILY TUBIFICIDAE	577.6	794.2	397.1	589.7	198.8	87.5
FAMILY NAIDIDAE	.0	72.2	54.2	42.1	37.6	6.3
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
CRICOTOPUS VAN DER WULP	18.1	.0	.0	6.0	10.4	.9
ORTHOCLADIUS VAN DER WULP	18.1	.0	.0	6.0	10.4	.9
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
PHAENOPSECTRA KIEFFER	18.1	36.1	.0	18.1	18.1	2.7
TOTAL	631.8	920.6	469.3	673.9		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	18.1	.0	6.0	10.4	.9
CLASS OLIGOCHAETA	577.6	866.4	469.3	637.8	205.3	94.6
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	54.2	36.1	.0	30.1	27.6	4.5

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = .556
VARIANCE = .020
MAXIMUM INDEX = 1.946
EVENNESS = .286
NO. OF SPECIES = 7

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 08/13/79

STATION NUMBER - 14
NUMBER OF REPLICATIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM NEMATODA	144.4	72.2	18.1	78.2	63.4	.4
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY ENCHYTRAEIDAE	.0	270.8	126.4	132.4	135.5	.7
FAMILY TUBIFICIDAE	7148.2	21083.0	4097.5	10776.2	9055.4	53.6
FAMILY NAIDIDAE						
PHYLUM ARTHROPODA						
ACARI	.0	.0	18.1	6.0	10.4	.0
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	.0	.0	18.1	6.0	10.4	.0
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE						
MONODIAMESA KIEFFER	144.4	.0	.0	48.1	83.4	.2
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	938.6	144.4	.0	361.0	505.4	1.8
CRICOTOPUS VAN DER WULP	11696.8	8772.6	1209.4	7226.2	5412.0	35.9
ORTHOCLADIUS VAN DER WULP	144.4	180.5	.0	108.3	95.5	.5
THIENEMANNIELLA KIEFFER	252.7	.0	.0	114.3	122.9	.6
ORTHOCLADINAE A	.0	36.1	.0	12.0	20.8	.1
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CHIRONOMINI NR. PARALAUTERBORNIELL	.0	144.4	.0	48.1	83.4	.2
HETEROTRISSOCLADIUS	72.2	144.4	72.2	96.3	41.7	.5
POLYPEDILUM FALLAX GP.	216.6	.0	126.4	114.3	108.8	.6
PHAENOPSECTRA KIEFFER	.0	36.1	.0	12.0	20.8	.1
TRIBE TANYTARSINI						
SIMULIUM ARCTICUM MALLOCH (PUPAE)	.0	.0	18.1	6.0	10.4	.0
SIMULIDAE LARVAE	18.1	36.1	.0	18.1	18.1	.1
FAMILY PISCIDAE	866.4	1010.8	938.6	938.6	72.2	4.7
TOTAL	21642.6	31931.4	6642.6	20102.3		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	144.4	72.2	18.1	78.2	63.4	.4
CLASS OLIGOCHAETA	7148.0	21353.8	4223.8	10908.5	9163.2	54.3
ORDER EPHEMEROPTERA	.0	.0	18.1	6.0	10.4	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	13537.9	9458.5	1426.0	8140.8	6162.5	40.5

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.135
VARIANCE - .0001
MAXIMUM INDEX - 2.890
EVENNESS - .393
NO OF SPECIES - 10

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 08/13/79

STATION NUMBER - 2
NUMBER OF REPITITIONS = 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA	18.1	36.1	18.1	24.1	10.4	1.2
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA	18.1	36.1	18.1	24.1	10.4	1.2
FAMILY DYTISCIDAE						
DERONECTES SHARP	36.1	.0	.0	12.0	20.8	.6
HYDROPORUS CLAIRVILLE	54.2	.0	.0	18.1	31.3	.9
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	198.6	180.5	72.2	150.4	68.3	7.2
SUBFAMILY ORTHOCLADIINAE						
CRICOTOPUS VAN DER WULP	577.6	126.4	198.6	300.8	242.9	14.4
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CHIRONOMUS MEIGEN	.0	18.1	72.2	30.1	37.6	1.4
CHIRONOMINI NR. PARALAUTERBORNIELL	.0	.0	36.1	12.0	20.8	.6
HETEROTRISSOCLADIUS	144.4	36.1	.0	60.2	75.2	2.9
TRIBE TANYTARSINI						
RHEOTANYTARSUS BAIUSE	956.7	776.2	920.6	884.5	95.5	42.4
TANYTARSUS VAN DER WULP	451.3	234.7	.0	228.6	225.7	11.0
CHIRONOMIDAE PUPAE	631.8	.0	343.0	324.9	316.3	15.6
FAMILY DOLICHOPODIDAE	18.1	.0	.0	6.0	10.4	.3
SIMULIDAE LARVAE	.0	.0	18.1	6.0	10.4	.3
FAMILY MISCIDAE	.0	.0	18.1	6.0	10.4	.3
TOTAL	3104.7	1444.0	1714.8	2087.8		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	18.1	36.1	18.1	24.1	10.4	1.2
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	108.3	36.1	18.1	54.2	47.8	2.6
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	2969.3	1371.8	1642.6	1991.6	849.8	95.4

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.782
VARIANCE = .0015
MAXIMUM INDEX = 2.708
EVENNESS = .658
NO OF SPECIES = 15

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 08/13/79

STATION NUMBER - 21
NUMBER OF REPLITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	108.3	90.3	198.6	132.4	58.0	4.6
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA	18.1	.0	18.1	12.0	10.4	.4
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	18.1	36.1	54.2	36.1	18.1	1.3
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	144.4	72.2	54.2	90.3	47.8	3.2
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	36.1	.0	.0	12.0	20.8	.4
CRICOTOPUS VAN DER WULP	2003.6	758.1	270.8	1010.8	893.6	35.4
ORTHOCLADIUS VAN DER WULP	144.4	.0	.0	48.1	83.4	1.7
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CHIRONOMUS MEIGEN	36.1	144.4	108.3	96.3	55.1	3.4
HETEROTRISSOCLADIUS	18.1	.0	36.1	18.1	18.1	.6
MICROTENDIPES KIEFFER	216.6	18.1	.0	78.2	120.2	2.7
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	.0	144.4	90.3	78.2	73.0	2.7
RHEOTANYTARSUS BAIUSC	126.4	.0	198.6	108.3	100.5	3.8
TANYTARSUS VAN DER WULP	18.1	.0	.0	6.0	10.4	.2
CHIRONOMIDAE PUPAE	126.4	126.4	415.2	222.6	166.7	7.8
FAMILY EPHYDRIDAE	.0	.0	18.1	6.0	10.4	.2
FAMILY EMPIDIDAE	.0	.0	18.1	6.0	10.4	.2
SIMULIUM ARCTICUM MALLOCH (PUPAE)	.0	18.1	.0	6.0	10.4	.2
SIMULIDAE LARVAE	1444.0	541.5	631.8	872.4	497.1	30.5
FAMILY MISCIDAE	.0	18.1	18.1	12.0	10.4	.4
CHRYSOPS MEIGEN	.0	.0	18.1	6.0	10.4	.2
TOTAL	4458.5	1967.5	2148.0	2858.0		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	108.3	90.3	198.6	132.4	58.0	4.6
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	18.1	.0	18.1	12.0	10.4	.4
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	2870.9	1263.5	1173.3	1769.0	954.6	61.9

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.905
VARIANCE - .0005
MAXIMUM INDEX - 2.996
EVENNESS - .636
NO OF SPECIES - 20

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 08/19/73

STATION NUMBER - 27
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	78.0	39.0	78.0	65.0	22.5	.9
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	935.7	370.4	1832.4	1046.1	737.2	14.9
FAMILY POLYMITARCIDAE						
EPHORON ALBUM SAY	39.0	19.5	.0	19.5	19.5	.3
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH	78.0	155.9	448.3	227.4	195.3	3.2
RHITHROGENA EATON	19.5	19.5	19.5	19.5	.0	.3
FAMILY EPHEMERELLIDAE						
EHPHEMERELLA WALSH	39.0	39.0	.0	26.0	22.5	.4
FAMILY LEPTOPHELBIIDAE						
CHOROTERPES EATON	428.8	857.7	2066.3	1117.6	849.1	15.9
TRAVERELLA ALBERTANA MCDUNNOUGH	19.5	311.9	331.4	220.9	174.7	3.1
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	2826.5	3430.8	2963.0	3073.4	316.9	43.8
OPHIOGOMPHUS SELYS	.0	19.5	19.5	13.0	11.3	.2
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS	.0	.0	39.0	13.0	22.5	.2
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	19.5	818.7	1052.6	630.3	541.7	9.0
CHEUMATOPSYCHE WALLENGREN	.0	292.4	19.5	104.0	163.5	1.5
FAMILY HYDROPTILIDAE						
HYDROPTILA DALMAN	.0	19.5	78.0	32.5	40.6	.5
MAYATRICHIA ROSS	19.5	78.0	39.0	45.5	29.8	.6
ORDER LEPIDOPTERA	.0	39.0	19.5	19.5	19.5	.3
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	.0	19.5	.0	6.5	11.3	.1
SUBFAMILY ORTHOCLADIINAE						
CRICOTOPUS VAN DER WULP	58.5	117.0	19.5	65.0	49.1	.9
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
ENDOCHIRONOMUS	.0	39.0	.0	13.0	22.5	.2
MICROTENDIPES KIEFFER	58.5	58.5	39.0	52.0	11.3	.7
POLYPEDILUM KIEFFER	.0	19.5	39.0	19.5	19.5	.3
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	.0	292.4	.0	97.5	168.8	1.4
RHEOTANYTARSUS BAIUSE	.0	.0	19.5	6.5	11.3	.1
CHIRONOMIDAE PUPAE	19.5	117.0	78.0	71.5	49.1	1.0
FAMILY DOLICHOPODIDAE	.0	19.5	.0	6.5	11.3	.1
SIMULIDAE LARVAE	.0	19.5	.0	6.5	11.3	.1
TOTAL	4639.4	7212.5	9200.8	7017.5		100.0

SUMMARY - MAJOR HEATHOS TAXA

PHYLUM NEMATOSA	[illegible]	.0	[illegible]	.0	.0	.0
CLASS OLIGOCHAETA	78.	39.0	78.[illegible]	65.0	22.5	.9
ORDER [illegible]	+386.[illegible]	52[illegible]4.7	766[illegible].8	5750.5	1704.3	81.9
ORDER [illegible]	[illegible]	19.5	19.[illegible]	13.[illegible]	11.3	.2
ORDER [illegible]	[illegible]	.0	[illegible]	.0	.0	.0
ORDER PLECOPTERA	[illegible]	[illegible]	[illegible]	[illegible]	.0	.0
ORDER COLEOPTERA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.0
ORDER TRICHOPTERA	39.	1203.6	1228.1	825.2	681.0	11.8
FAMILY CHIRONOMIDA	[illegible]	662.8	194.9	331.4	288.5	4.7

DIVERSITY INDEX CALCULATION

SHANNON INDEX - [illegible]
VARIANCE - [illegible]
MAXIMUM INDEX - [illegible]
[illegible] - [illegible]
[illegible] - [illegible]

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RMOSC AQUATIC STUDIES
SAMPLE DATE: 08/14/79

STATION NUMBER - 39
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXICA						
FAMILY TUBIFICIDAE	19.5	78.0	19.5	39.0	33.8	1.5
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	1130.6	1715.4	974.7	1273.6	390.5	47.9
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH	.0	19.5	19.5	13.0	11.3	.5
RHITHROGENA EATON	.0	97.5	.0	32.5	56.3	1.2
FAMILY LEPTOPHLEBIIDAE						
CHOROTERPES EATON	19.5	19.5	19.5	19.5	.0	.7
TRAVERELLA ALBERTANA MCDUNNOUGH	.0	.0	19.5	6.5	11.3	.2
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	682.3	233.9	1247.6	721.2	507.9	27.1
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	58.5	39.0	448.3	181.9	230.9	6.8
FAMILY HYDROPTILIDAE						
HYDROPTILA DALMAN	19.5	.0	.0	6.5	11.3	.2
MAYATRICHIA ROSS	.0	.0	58.5	19.5	33.8	.7
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
CRICOTOPUS VAN DER WULP	19.5	19.5	.0	13.0	11.3	.5
THIENEMANNIELLA KIEFFER	97.5	.0	.0	32.5	56.3	1.2
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CHIRONOMINI NR. PARALAUTERBORNIELL	.0	.0	19.5	6.5	11.3	.2
MICROTENDIPES KIEFFER	.0	.0	19.5	6.5	11.3	.2
POLYPEDILUM KIEFFER	39.0	39.0	97.5	58.5	33.8	2.2
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	58.5	58.5	389.9	168.9	191.3	6.4
CHIRONOMIDAE PUPAE	.0	19.5	78.0	32.5	40.6	1.2
SIMULIDAE LARVAE	19.5	.0	19.5	13.0	11.3	.5
HEXATOMA LATREILLE	.0	.0	39.0	13.0	22.5	.5
TOTAL	2163.7	2339.2	3469.8	2657.6		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	19.5	78.0	19.5	39.0	33.8	1.5
ORDER EPHEMEROPTERA	1832.4	2085.8	2280.7	2066.3	224.8	77.8
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	78.0	39.0	506.8	207.9	259.6	7.8
FAMILY CHIRONOMIDAE	214.4	136.5	604.3	318.4	250.6	12.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.608
VARIANCE - .006
MAXIMUM INDEX - 2.944
EVENNESS - .546
NO. OF SPECIES - 19

OCTOBER

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 10/8/79

STATION NUMBER - 13
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	36.1	72.2	90.3	66.2	27.6	4.4
FAMILY NAIDIDAE	18.1	884.5	54.2	318.9	490.1	21.2
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	90.3	108.3	180.5	126.4	47.8	8.4
ORDER PLECOPTERA						
FAMILY CAPNIDAE	830.3	992.8	541.5	788.2	228.6	52.4
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE	72.2	18.1	18.1	36.1	31.3	2.4
SUBFAMILY ORTHOCLADIINAE						
CRICOTOPUS VAN DER WULP	.0	.0	18.1	6.0	10.4	.4
THIENEMANNIELLA KIEFFER	.0	.0	18.1	6.0	10.4	.4
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	.0	.0	18.1	6.0	10.4	.4
SIMULIUM ARCTICUM MALLOCH (PUPAE)	108.3	36.1	54.2	66.2	37.6	4.4
SIMULIDAE LARVAE	180.5	36.1	36.1	84.2	83.4	5.6
TOTAL	1335.7	2148.0	1028.9	1504.2		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	54.2	956.7	144.4	385.1	497.1	25.6
ORDER EPHEMEROPTERA	90.3	108.3	180.5	126.4	47.8	8.4
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	830.3	992.8	541.5	788.2	228.6	52.4
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	72.2	18.1	72.2	54.2	31.3	3.6

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.468
VARIANCE - .0007
MAXIMUM INDEX - 2.303
EVENNESS - .637
NO OF SPECIES - 10

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 10/8/79

STATION NUMBER - 14
NUMBER OF REPITITIONS = 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM NEMATODA	433.2	.0	162.5	198.6	218.9	1.6
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	8592.1	7725.6	2960.3	6426.0	3032.5	50.6
FAMILY NAIDIDAE	4259.9	.0	3321.3	2527.1	2238.3	19.9
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	.0	72.2	72.2	48.1	41.7	.4
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PROCLADIUS SKUSE	72.2	72.2	72.2	72.2	.0	.6
SUBFAMILY DIAMESINAE	.0	144.4	.0	48.1	83.4	.4
DIAMESA MEIGEN	144.4	.0	.0	48.1	83.4	.4
SUBFAMILY ORTHOCLADIINAE						
CRICOTOPUS VAN DER WULP	505.4	216.6	505.4	409.1	166.7	3.2
ORTHOCLADIUS VAN DER WULP	144.4	216.6	216.6	192.5	41.7	1.5
THIENEMANNIELLA KIEFFER	72.2	.0	216.6	96.3	110.3	.8
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
ENDOCHIRONOMUS	72.2	1516.2	.0	529.5	855.3	4.2
TRIBE TANYTARSINI						
RHEOTANYTARSUS BAIUSE	.0	144.4	.0	48.1	83.4	.4
SIMULIDAE LARVAE	72.2	.0	.0	24.1	41.7	.2
FAMILY MISCIDAE	4115.5	.0	1949.5	2021.7	2058.7	15.9
TOTAL	18483.8	10108.3	9476.5	12689.5		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	433.2	.0	162.5	198.6	218.9	1.6
CLASS OLIGOCHAETA	12852.0	7725.6	6281.6	8953.1	3452.9	70.6
ORDER EPHEMEROPTERA	.0	72.2	72.2	48.1	41.7	.4
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	1010.8	2310.5	1010.8	1444.0	750.3	11.4

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.493
VARIANCE = .0001
MAXIMUM INDEX = 2.639
EVENNESS = .566
NO OF SPECIES = 14

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 10/8/79

STATION NUMBER - 20
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXICA						
FAMILY TUBIFICIDAE	18.1	72.2	126.4	72.2	54.2	2.4
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
LACCOPHILUS LEACH	18.1	.0	.0	6.0	10.4	.2
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	18.1	.0	.0	6.0	10.4	.2
CHEUMATOPSYCHE WALLENGREN	.0	.0	36.1	12.0	20.8	.4
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	18.1	36.1	18.1	24.1	10.4	.8
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	36.1	162.5	.0	66.2	85.3	2.2
SUBFAMILY ORTHOCLADIINAE						
CARDIOCLADIUS KIEFFER	90.3	306.9	.0	132.4	157.7	4.5
CRICOTOPUS VAN DER WULP	234.7	415.2	379.1	343.0	95.5	11.6
ORTHOCLADINAE A	.0	397.1	541.5	312.9	280.4	10.5
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
MICROTENDIPES KIEFFER	36.1	.0	.0	12.0	20.8	.4
TRIBE TANYTARSINI						
RHEOTANYTARSUS BAIUSE	.0	18.1	36.1	18.1	18.1	.6
CHIRONOMIDAE PUPAE	938.6	1407.9	1010.8	1119.1	252.7	37.7
SIMULIUM ARCTICUM MALLOCH (PUPAE)	343.0	18.1	72.2	144.4	174.1	4.9
SIMULIDAE LARVAE	613.7	433.2	938.6	661.9	256.1	22.3
FAMILY MISCIDAE	36.1	54.2	18.1	36.1	18.1	1.2
TOTAL	2400.7	3321.3	3176.9	2966.3		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	18.1	72.2	126.4	72.2	54.2	2.4
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	18.1	.0	.0	6.0	10.4	.2
ORDER TRICHOPTERA	18.1	.0	36.1	18.1	18.1	.6
FAMILY CHIRONOMIDAE	1335.7	2707.6	1967.5	2003.6	686.6	67.5

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.844
VARIANCE - .0224
MAXIMUM INDEX - 2.708
EVENNESS - .681
NO OF SPECIES - 15

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 10/8/79

STATION NUMBER - 21
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXICA						
FAMILY TUBIFICIDAE	54.2	306.9	162.5	174.5	126.8	7.7
FAMILY NAIDIDAE	.0	198.6	.0	66.2	114.6	2.9
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
LACCOPHILUS LEACH	18.1	.0	.0	6.0	10.4	.3
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	36.1	18.1	.0	18.1	18.1	.8
CHEUMATOPSYCHE WALLENGREN	.0	.0	18.1	6.0	10.4	.3
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	54.2	216.6	54.2	108.3	93.8	4.8
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	54.2	18.1	36.1	36.1	18.1	1.6
SUBFAMILY ORTHOCLADIINAE						
CRICOTOPUS VAN DER WULP	36.1	.0	18.1	18.1	18.1	.8
EUKIEFFERIELLA THIENEMANN	.0	.0	18.1	6.0	10.4	.3
ORTHOCLADINAE A	288.8	324.9	252.7	288.8	36.1	12.7
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	.0	36.1	.0	12.0	20.8	.5
TANYTARSUS VAN DER WULP	.0	18.1	18.1	12.0	10.4	.5
CHIRONOMIDAE PUPAE	144.4	288.8	324.9	252.7	95.5	11.1
FAMILY DOLICHOPODIDAE	18.1	.0	.0	6.0	10.4	.3
SIMULIUM ARCTICUM MALLOCH (PUPAE)	180.5	270.8	108.3	186.5	81.4	8.2
SIMULIDAE LARVAE	1209.4	1227.4	740.1	1059.0	276.3	46.6
FAMILY MISCIDAE	.0	36.1	.0	12.0	20.8	.5
TABANUS LINNAEUS	.0	18.1	.0	6.0	10.4	.3
TOTAL	2093.9	2978.3	1750.9	2274.4		100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	54.2	505.4	162.5	240.7	235.6	10.6
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	18.1	.0	.0	6.0	10.4	.3
ORDER TRICHOPTERA	36.1	18.1	18.1	24.1	10.4	1.1
FAMILY CHIRONOMIDAE	523.5	685.9	667.9	625.8	89.0	27.5

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.816
VARIANCE - .006
MAXIMUM INDEX - 2.890
EVENNESS - .628
NO OF SPECIES - 18

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
RBOSC AQUATIC STUDIES
SAMPLE DATE: 10/9/79

STATION NUMBER - 27
NUMBER OF REPITITIONS - 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA	175.4	2963.0	467.8	1202.1	1532.0	37.3
ORDER HAPLOTAXIDA						
FAMILY NAIDIDAE	194.9	.0	.0	65.0	112.5	2.0
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	58.5	39.0	136.5	78.0	51.6	2.4
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH	97.5	.0	19.5	39.0	51.6	1.2
FAMILY EPHEMERELLIDAE						
EPHEMERELLA WALSH	292.4	39.0	350.9	227.4	165.8	7.1
FAMILY LEPTOPHLEBIIDAE						
CHOROTERPES EATON	19.5	.0	19.5	13.0	11.3	.4
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	370.4	39.0	39.0	149.4	191.3	4.6
ORDER PLECOPTERA						
FAMILY CAPNIDAE	39.0	.0	58.5	32.5	29.8	1.0
ORDER HEMIPTERA						
FAMILY CORIXIDAE	19.5	.0	.0	6.5	11.3	.2
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS	19.5	.0	136.5	52.0	73.8	1.6
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	.0	.0	155.9	52.0	90.0	1.6
CHEUMATOPSYCHE WALLENGREN	.0	.0	58.5	19.5	33.8	.6
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	.0	.0	78.0	26.0	45.0	.8
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
PENTANEURINI	78.0	.0	19.5	32.5	40.6	1.0
SUBFAMILY ORTHOCLADIINAE						
CRICOTOPUS VAN DER WULP	662.8	194.9	506.8	454.8	238.2	14.1
ORTHOCLADIUS VAN DER WULP	.0	39.0	.0	13.0	22.5	.4
PSECTROCLADIUS	.0	19.5	.0	6.5	11.3	.2
TRICHOCLADIUS	.0	19.5	19.5	13.0	11.3	.4
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CHIRONOMUS MEIGEN	.0	19.5	19.5	13.0	11.3	.4
MICROTENDIPES KIEFFER	292.4	175.4	448.3	305.4	136.9	9.5
POLYPEDILUM KIEFFER	273.9	350.9	117.0	246.9	119.1	7.7
PHAENOPSECTRA KIEFFER	136.5	175.4	.0	104.0	92.1	3.2
TRIBE TANYTARSINI						
TANYTARSUS VAN DER WULP	58.5	.0	.0	19.5	33.8	.6
CHIRONOMIDAE PUPAE	97.5	39.0	19.5	52.0	40.6	1.6
TOTAL	2885.0	4113.1	2670.6	3222.9		100.0

SUMMARY - [illegible]

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	[illegible].4	2963.[illegible]	467.8	1257.1	1469.5	39.3
ORDER EPHEMEROPTERA	3[illegible]8.2	1[illegible]7.[illegible]	565.3	[illegible]05.8	364.2	15.7
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	[illegible]	.0	58.5	32.5	29.8	1.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	[illegible].5	.0	35[illegible].9	123.5	197.[illegible]	3.8
FAMILY CHIRONOMIDAE	1[illegible]8.4	1[illegible]33.1	115[illegible].1	126[illegible].6	298.4	39.1

DIVERSITY INDEX CALCULATION

SHANNON [illegible] - [illegible]
VARIANCE - [illegible]
MAXIMUM [illegible] - [illegible]
EVENNESS - [illegible]
NO OF SPECIES -

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS
ROSC AQUATIC STUDIES
SAMPLE DATE: 10/9/79

STATION NUMBER = 29
NUMBER OF REPITITIONS = 3

TAXON	DENSITY (#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	214.4	175.4	117.0	168.9	49.1	3.0
FAMILY NAIDIDAE	136.5	136.5	117.0	130.0	11.3	2.3
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	877.2	467.8	604.3	649.8	208.4	11.4
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH	1968.8	1442.5	2826.5	2079.3	698.6	36.3
FAMILY EPHEMERELLIDAE						
EPHEMERELLA WALSH	1501.0	467.8	58.5	675.8	743.4	11.8
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	194.9	97.5	39.0	110.5	78.8	1.9
ORDER PLECOPTERA						
FAMILY CAPNIDAE	19.5	19.5	19.5	19.5	.0	.3
FAMILY CHLOROPERLIDAE	97.5	58.5	58.5	71.5	22.5	1.2
FAMILY PERLODIDAE						
ISOGENOIDES KLAPALEK	.0	.0	78.0	26.0	45.0	.5
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	701.8	545.8	623.8	623.8	78.0	10.9
CHEUMATOPSYCHE WALLENGREN	233.9	117.0	350.9	233.9	117.0	4.1
FAMILY GLOSSOSOMATIDAE						
PROTOPTILA ROSS	19.5	97.5	58.5	58.5	39.0	1.0
ORDER LEPIDOPTERA						
FAMILY PYRALIDAE	19.5	19.5	19.5	19.5	.0	.3
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE	97.5	136.5	292.4	175.4	103.1	3.1
SUBFAMILY ORTHOCLADIINAE						
CRICOTOPUS VAN DER WULP	155.9	175.4	292.4	207.9	73.8	3.6
ORTHOCLADIUS VAN DER WULP	19.5	.0	.0	6.5	11.3	.1
ORTHOCLADINAE A	97.5	.0	.0	32.5	56.3	.6
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
ENDOCHIRONOMUS	39.0	.0	58.5	32.5	29.8	.6
MICROTENDIPES KIEFFER	39.0	.0	.0	13.0	22.5	.2
POLYPEDILUM KIEFFER	97.5	117.0	292.4	168.9	107.4	3.0
PHAENOPSECTRA KIEFFER	.0	.0	19.5	6.5	11.3	.1
TRIBE TANYTARSINI						
RHEOTANYTARSUS BAIUSE	.0	39.0	.0	13.0	22.5	.2
CHIRONOMIDAE PUPAE	97.5	175.4	194.9	155.9	51.6	2.7
SIMULIUM ARCTICUM MALLOCH (PUPAE)	.0	.0	19.5	6.5	11.3	.1
SIMULIDAE LARVAE	19.5	.0	.0	6.5	11.3	.1
HEXATOMA LATREILLE	58.5	.0	39.0	32.5	29.8	.6
TOTAL	6705.7	4288.5	6179.3	5724.5		100.0

SUMM[illegible] - [illegible] NTHOS I-[illegible]

PHYLUM [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CLASS [illegible]	[illegible]	311.9	233.[illegible]	298.9	[illegible]	5.2
ORDE[illegible]	[illegible]	2479.6	3528.3	3515.3	[illegible]	61.4
ORDE[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ORDE[illegible]	117.[illegible]	78.[illegible]	155.[illegible]	117.[illegible]	39.[illegible]	2.0
ORDE[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ORD[illegible]	[illegible]	[illegible].2	1033.1	916.2	141.6	16.0
FAMILY [illegible]	[illegible]	143.3	1158.1	812.2	[illegible]	14.2

DIVERSITY INDEX CALCULATIONS

SHANNON [illegible] = [illegible]
VARIANCE = [illegible]
MAXIMUM [illegible] = [illegible]
EVENNESS = [illegible]
NO. OF [illegible] = [illegible]

APPENDIX 5-1

Surface Water Data

APPENDIX 5-1.1

U.S. Geological Survey Surface Gaging Station Physical Data

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-28-80

STATION NUMBER 09306235 CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395422 LONGITUDE 1083156 DRAINAGE AREA 8.61 DATUM 6980.00 STATE 08 COUNTY 103

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.16	.24	.10	.06	.10	.14	.50	.88	.53	.22	.41
2	.30	.16	.22	.10	.06	.10	.10	.38	.88	.53	.24	.44
3	.28	.20	.20	.10	.07	.07	.11	.50	.84	.56	.28	.41
4	.12	.18	.25	.10	.07	.10	.14	.50	.84	.56	.30	.44
5	.14	.16	.26	.10	.07	.07	.12	.52	.84	.53	.30	.44
6	.14	.14	.26	.08	.07	.07	.12	.52	.84	.53	.30	.44
7	.14	.14	.25	.08	.07	.08	.10	.53	.84	.53	.30	.44
8	.24	.14	.23	.08	.07	.12	.12	.80	.88	.53	.30	.44
9	.26	.14	.22	.08	.07	.07	.16	.76	.80	.50	.30	.44
10	.24	.14	.20	.08	.08	.10	.20	.72	.76	.50	.32	.47
11	.24	.14	.19	.06	.10	.06	.13	.72	.72	.50	.32	.50
12	.20	.16	.18	.06	.08	.10	.18	.72	.68	.50	.32	.50
13	.20	.16	.16	.06	.10	.07	.22	.76	.64	.47	.32	.47
14	.24	.19	.15	.06	.12	.06	.20	.80	.68	.47	.32	.38
15	.20	.28	.14	.06	.12	.06	.20	.80	.64	.50	.35	.32
16	.24	.28	.14	.06	.14	.06	.16	.96	.64	.47	.49	.47
17	.16	.28	.13	.06	.12	.07	.12	1.1	.68	.44	.47	.44
18	.09	.27	.13	.06	.16	.06	.12	1.0	.68	.41	.44	.44
19	.10	.26	.12	.07	.08	.07	.14	.88	.68	.41	.41	.41
20	.12	.26	.12	.07	.08	.07	.14	.84	.64	.41	.41	.41
21	.14	.24	.11	.07	.08	.08	.18	.80	.60	.44	.44	.41
22	.16	.22	.11	.06	.07	.04	.18	1.3	.53	.45	.41	.41
23	.18	.28	.10	.06	.08	.05	.16	1.3	.53	.44	.41	.41
24	.20	.35	.10	.05	.08	.05	.14	1.2	.53	.41	.41	.38
25	.24	.24	.10	.05	.10	.05	.08	1.3	.50	.35	.41	.41
26	.20	.26	.10	.06	.10	.08	.14	1.3	.50	.14	.41	.41
27	.22	.26	.10	.06	.10	.08	.30	1.4	.50	.30	.44	.38
28	.18	.28	.10	.06	.10	.12	.38	1.2	.50	.30	.44	.38
29	.18	.28	.10	.06	---	.15	.41	1.1	.50	.32	.44	.38
30	.18	.28	.10	.06	---	.07	.41	1.1	.53	.30	.44	.32
31	.16	---	.10	.06	---	.10	---	.96	---	.22	.44	---
TOTAL	5.99	6.54	4.91	2.17	2.50	2.43	5.30	27.27	20.30	13.55	11.40	12.60
MEAN	.19	.22	.16	.070	.089	.078	.18	.88	.68	.44	.37	.42
MAX	.30	.35	.26	.10	.16	.15	.41	1.4	.88	.56	.49	.50
MIN	.09	.14	.10	.05	.06	.04	.08	.38	.50	.14	.22	.32

WTR YR 1979 TOTAL 114.95 MEAN .31 MAX 1.4 MIN .04

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-28-80

STATION NUMBER 09306235 CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395422 LONGITUDE 1083156 DRAINAGE AREA 8.61 DATUM 6980.00 STATE 08 COUNTY 103

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
PROVISIONAL DATA MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	1090	---	912	---	---	900	1390		834	784
2		---	1100	---	907	---	984	906	1330		834	727
3		---	1140	---	914	---	---	831	1220		889	717
4		---	1030	---	919	---	972	709	1120		891	836
5		---	952	---	942	---	938	701	---		888	889
6		---	951	892	995	---	913	662	984		882	871
7		---	937	950	1010	---	894	622	937		923	859
8		---	876	---	1070	---	884	624	956		936	829
9		---	910	---	1080	---	---	---	955		888	762
10		---	944	902	1090	---	771	---	---		706	690
11		---	944	926	1100	---	---	---	---		654	603
12		---	1020	940	1110	---	---	---	---		647	593
13		---	956	954	1110	---	---	---	---		630	816
14		1070	943	957	1110	976	761	2170	---		852	960
15		1040	939	956	1130	1020	741	1150	---		939	918
16		1020	941	969	1160	992	856	1080	---		837	847
17		917	931	975	1180	993	1030	1060	---		591	758
18		---	975	972	---	1010	1030	1540	---		590	822
19		---	1130	961	1100	991	1020	2320	---		647	808
20		929	1080	933	1150	979	1030	2120	---		649	756
21		1110	1010	---	1160	761	1040	1150	---		818	713
22		1100	1000	957	1140	---	1050	870	---		974	664
23		---	992	---	---	1020	1050	904	---		978	651
24		---	995	---	1150	877	1020	936	---		946	618
25		1090	987	933	---	---	998	960	---		919	601
26		1090	---	941	1120	718	1010	966	---		880	758
27		1090	---	949	1120	---	991	1110	---		926	788
28		1080	---	942	---	585	925	1640	---		961	715
29		1120	---	937	---	602	921	1420	---		931	679
30		1100	682	941	---	---	930	1550	---		906	691
31		---	---	935	---	---	---	1530	---		831	---
MEAN		1060	979	944	1070	886	948	1170	1110		832	757

WTR YR 1979 MEAN 957 MAX 2320 MIN 585

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-28-80

STATION NUMBER 09306235 CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395422 LONGITUDE 1083156 DRAINAGE AREA 8.61 DATUM 6980.00 STATE 08 COUNTY 103

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
PROVISIONAL DATA MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	4.0	-0.5	2.0	---	---	10.5	22.0		26.5	23.5
2		---	1.0	---	2.0	---	9.5	8.5	22.0		25.5	23.5
3		---	1.0	.5	1.5	---	11.0	9.5	20.5		25.5	23.5
4		---	4.0	1.0	2.5	---	10.0	23.0	20.5		27.5	23.0
5		---	2.5	2.5	2.0	---	20.5	19.5	11.5		27.0	23.5
6		---	1.5	2.5	2.5	---	21.5	17.0	19.0		26.0	24.0
7		---	1.0	2.0	2.0	---	19.0	9.0	22.5		24.5	22.5
8		---	1.0	2.0	2.5	---	23.0	8.0	23.5		24.0	22.0
9		---	2.5	2.5	2.5	---	19.5	---	18.5		24.5	22.5
10		---	3.0	3.0	3.0	---	5.5	---	---		24.5	20.5
11		---	2.5	3.0	3.0	---	10.0	---	---		25.0	23.0
12		---	2.5	3.0	3.5	---	15.5	---	---		22.5	21.0
13		---	2.0	2.0	3.0	---	17.0	---	---		23.0	18.5
14		5.0	2.5	2.5	3.0	8.0	21.0	20.0	---		15.5	19.5
15		5.0	2.5	2.5	3.0	9.0	23.0	20.5	---		16.0	20.5
16		6.0	2.0	2.5	2.5	8.0	25.0	17.5	---		15.0	22.0
17		3.0	3.0	3.0	2.5	9.0	23.0	20.5	---		18.5	21.0
18		2.5	3.0	3.0	2.5	8.5	20.5	21.5	---		19.5	21.0
19		3.5	2.5	3.5	3.5	9.5	15.0	22.0	---		17.0	21.0
20		4.0	2.0	2.0	3.5	9.0	20.5	22.5	---		17.0	18.5
21		5.0	2.0	2.5	3.5	7.5	20.0	17.5	---		24.0	21.0
22		4.5	2.5	1.5	2.0	12.5	20.0	16.0	---		22.0	20.0
23		3.0	1.5	1.0	2.5	9.5	20.0	20.0	---		24.0	21.0
24		3.5	3.0	2.0	3.0	12.5	20.5	19.0	---		24.5	21.0
25		4.5	2.5	3.0	3.0	7.0	20.0	16.0	---		23.0	18.0
26		4.5	1.0	2.0	3.5	10.0	22.5	13.5	---		22.0	19.5
27		3.0	.5	2.5	2.5	9.0	20.0	18.0	---		24.0	20.5
28		4.0	1.5	2.0	---	12.0	16.5	16.5	---		23.5	19.5
29		4.0	2.0	2.0	---	1.5	16.5	20.0	---		23.5	20.0
30		3.5	1.5	1.0	---	---	17.0	20.5	---		19.5	20.0
31		---	1.0	2.0	---	---	---	20.5	---		22.5	---
MAX		6.0	4.0	3.5	3.5	12.5	25.0	23.0	23.5		27.5	24.0

WTR YR 1979 MEAN 12.0 MAX 27.5 MIN -0.5

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-28-80

STATION NUMBER 09306215 CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395422 LONGITUDE 1083156 DRAINAGE AREA 8.61 DATUM 6980.00 STATE 08 COUNTY 103

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
PROVISIONAL DATA MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	1.0	---	1.5	---	---	7.0	6.5		8.5	6.0
2		---	1.0	---	1.5	---	-1.0 -.5	6.0	6.5		7.5	6.5
3		---	1.0	---	1.0	---	---	3.5	7.0		7.0	7.0
4		---	1.0	.0	1.0	---	.0	1.5	7.0		7.0	6.5
5		---	1.0	1.0	.5	---	1.0	4.5	---		8.0	6.0
6		---	1.0	2.0	1.5	---	1.0	2.5	5.5		9.5	6.5
7		---	1.0	.5	1.5	---	.5	2.0	5.0		9.0	6.5
8		---	1.0	.5	1.0	---	.5	2.5	6.0		9.5	7.5
9		---	1.0	1.0	1.0	---	.5	---	6.5		9.0	7.5
10		---	1.0	2.0	1.0	---	.5	---	---		8.5	8.5
11		---	1.0	2.0	1.5	---	---	---	---		7.5	6.5
12		---	1.0	2.5	2.0	---	---	---	---		8.5	4.5
13		---	1.0	.5	2.0	---	---	---	---		9.0	4.5
14		2.0	1.0	1.0	1.5	1.0	---	6.5	---		8.5	4.0
15		1.0	1.0	1.0	1.0	1.0	.5	4.5	---		8.0	3.5
16		1.0	1.0	1.5	1.0	1.0	1.0	6.0	---		8.5	4.0
17		1.0	1.0	1.5	1.0	1.0	2.5	6.0	---		7.0	4.5
18		.0	---	2.0	.5	1.0	2.0	6.5	---		8.5	5.0
19		.5	2.0	1.5	.5	1.0	2.0	6.5	---		9.0	5.5
20		1.0	.5	.5	1.5	1.0	1.5	6.5	---		8.5	6.5
21		1.0	1.0	.0	1.0	1.0	1.5	7.5	---		7.0	5.5
22		1.0	1.0	1.0	.5	1.0	2.0	7.5	---		7.0	6.0
23		1.0	1.0	.5	.5	.5	2.5	7.0	---		7.0	6.0
24		.5	1.0	.5	1.0	.5	5.0	7.0	---		7.5	6.5
25		1.5	1.0	2.0	.5	1.0	3.0	8.5	---		7.5	6.5
26		2.0	.0	1.5	1.0	1.0	1.0	9.0	---		6.5	7.0
27		1.0	---	1.0	1.5	1.0	2.0	6.5	---		6.5	5.5
28		1.0	-0.5	1.0	---	1.0	4.5	4.5	---		7.5	5.0
29		2.0	1.0	1.0	---	1.0	3.0	4.0	---		6.0	5.0
30		2.0	1.0	.5	---	---	4.0	4.5	---		7.0	5.0
31		---	-0.5	.5	---	---	---	5.5	---		7.0	---
MIN		.0	-0.5	.0	.5	.5	-1.0	1.5	5.0		6.0	3.5

WTR YR 1979 MEAN 3.5 MAX 9.5 MIN -1.0

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-29-80

STATION NUMBER 09306237 DRY FORK NEAR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395520 LONGITUDE 1083155 DRAINAGE AREA 2.74 DATUM 7030.00 STATE 08 COUNTY 103

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
PROVISIONAL DATA MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---				
2								---				
3								---				
4								---				
5								---				
6								---				
7								---				
8								---				
9								---				
10								---				
11								---				
12								---				
13								---				
14								---				
15								---				
16								---				
17								---				
18								---				
19								---				
20								---				
21								---				
22								---				
23								---				
24								---				
25								---				
26								---				
27								---				
28								295				
29								317				
30								---				
31								---				
MEAN								306				

WTR YR 1979 MEAN 306 MAX 317 MIN 295

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-29-80

STATION NUMBER 09306237 DRY FORK NEAR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395520 LONGITUDE 1083155 DRAINAGE AREA 2.74 DATUM 7030.00 STATE 08 COUNTY 103

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
PROVISIONAL DATA MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	11.5				
2							---	11.0				
3							---	6.0				
4							---	26.0				
5							---	19.5				
6							---	23.5				
7							---	5.0				
8							---	7.5				
9							---	5.0				
10							---	12.0				
11							---	13.5				
12							---	21.5				
13							---	26.0				
14							---	32.5				
15							---	33.0				
16							---	30.5				
17							---	33.0				
18							---	35.5				
19							---	32.0				
20							---	34.5				
21							---	38.0				
22							---	41.5				
23							---	38.5				
24							16.5	26.0				
25							19.5	20.0				
26							26.0	34.5				
27							26.0	36.5				
28							17.5	16.0				
29							27.0	15.0				
30							29.0	11.5				
31							---	---				
MAX							29.0	41.5				

WTR YR 1979 MEAN 23.0 MAX 41.5 MIN 5.0

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-29-80

STATION NUMBER 09306237 DRY FORK NEAR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395520 LONGITUDE 1083155 DRAINAGE AREA 2.74 DATUM 7030.00 STATE 08 COUNTY 103

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
PROVISIONAL DATA
MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	---				
2							---	---				
3							---	---				
4							---	---				
5							---	---				
6							---	---				
7							---	---				
8							---	---				
9							---	---				
10							---	---				
11							---	---				
12							---	---				
13							---	---				
14							---	---				
15							---	---				
16							---	---				
17							---	---				
18							---	---				
19							---	---				
20							---	6.0				
21							---	---				
22							---	7.5				
23							---	7.5				
24							5.0	10.0				
25							---	---				
26							---	---				
27							---	7.5				
28							---	9.5				
29							---	3.0				
30							---	6.5				
31							---	---				
MIN							5.0	3.0				

WTR YR 1979 MEAN 7.0 MAX 10.0 MIN 3.0

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-29-80

STATION NUMBER 09306240 HOX ELDER GULCH NEAR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395318 LONGITUDE 1083140 DRAINAGE AREA 9.21 DATUM 6955.00 STATE 08 COUNTY 103

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	2.0	2.1	.07	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	2.0	1.8	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	1.9	1.8	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	1.9	1.7	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	1.9	1.5	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	1.9	1.5	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	2.2	1.5	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	2.3	1.5	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	2.4	1.4	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	2.2	1.2	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	2.3	1.0	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.06	2.2	1.0	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.05	2.2	.88	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.16	2.4	.84	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.50	2.5	.76	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.86	2.6	.68	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	1.1	2.8	.62	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	1.4	3.0	.59	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	1.6	3.3	.55	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	1.5	3.5	.50	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	1.5	3.5	.40	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	1.5	3.2	.37	.01	.00	.00
23	.00	.00	.00	.00	.00	.00	1.5	3.3	.31	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	1.6	3.4	.27	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	1.7	3.2	.25	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	1.7	2.9	.21	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	1.7	2.9	.17	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	1.9	2.8	.13	.00	.00	.00
29	.00	.00	.00	.00	---	.00	1.9	2.6	.06	.00	.00	.00
30	.00	.00	.00	.00	---	.00	1.8	2.5	.08	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	2.3	---	.00	.00	---
TOTAL	.00	.00	.00	.00	.00	.00	24.03	80.1	25.67	.08	.00	.00
MEAN	.000	.000	.000	.000	.000	.000	.80	2.58	.86	.003	.000	.000
MAX	.00	.00	.00	.00	.00	.00	1.9	3.5	2.1	.07	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	1.9	.06	.00	.00	.00

WTR YR 1979 TOTAL 129.88 MEAN .36 MAX 3.5 MIN .00

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-29-80

STATION NUMBER 09306240 BOX ELDER GULCH NEAR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395318 LONGITUDE 1083140 DRAINAGE AREA 9.21 DATUM 6955.00 STATE 08 COUNTY 103

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
PROVISIONAL DATA
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	655	564	668	---		
2						---	601	433	705	524		
3						---	653	419	712	---		
4						681	786	---	711	---		
5						693	944	---	704	---		
6						743	1100	---	723	---		
7						752	1000	662	718	---		
8						752	1020	646	714	---		
9						736	---	620	719	---		
10						715	---	581	691	---		
11						726	---	536	698	---		
12						717	---	469	698	---		
13						714	---	393	702	---		
14						729	---	548	700	---		
15						748	1040	787	689	---		
16						818	1390	761	670	---		
17						733	848	---	657	---		
18						742	858	768	673	---		
19						733	873	806	667	---		
20						813	876	783	631	---		
21						770	852	755	670	---		
22						654	843	558	714	---		
23						703	837	547	705	---		
24						791	834	743	683	---		
25						841	832	747	742	---		
26						877	818	737	774	---		
27						907	791	525	757	---		
28						822	766	684	---	---		
29						667	737	725	---	---		
30						802	704	636	---	---		
31						659	---	621	---	---		
MEAN						751	861	632	700	524		

WTR YR 1979 MEAN 731 MAX 1390 MIN 393

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-29-80

STATION NUMBER 09306240 BOX ELDER GULCH NEAR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395318 LONGITUDE 1083140 DRAINAGE AREA 9.21 DATUM 6955.00 STATE 08 COUNTY 103

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
PROVISIONAL DATA MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						~~-1.0~~ -.5	---	13.0	19.5	29.0		
2						-0.5	---	8.0	20.5	24.5		
3						.0	---	5.5	20.5	---		
4						---	---	---	20.0	---		
5						---	---	---	22.0	---		
6						---	---	---	20.5	---		
7						---	---	7.0	19.5	---		
8						---	---	11.0	9.0	---		
9						---	11.0	10.0	19.0	---		
10						---	1.5	12.0	24.0	---		
11						---	4.5	13.0	26.0	---		
12						---	9.0	20.0	28.0	---		
13						---	12.5	21.5	27.0	---		
14						---	16.0	21.5	24.0	---		
15						---	17.0	18.0	24.0	---		
16						---	20.5	16.5	26.0	---		
17						---	19.0	20.5	25.0	---		
18						---	17.0	21.0	20.5	---		
19						---	10.5	20.5	20.5	---		
20						---	18.0	20.0	27.5	---		
21						---	17.0	20.0	27.5	---		
22						---	18.5	20.0	30.0	---		
23						---	18.5	20.0	31.5	---		
24						---	15.5	15.0	31.0	---		
25						---	17.5	13.0	30.0	---		
26						---	19.0	21.5	29.0	---		
27						---	20.0	20.5	29.5	---		
28						---	15.5	16.5	30.5	---		
29						---	14.5	15.5	32.0	---		
30						---	20.5	18.0	29.0	---		
31						---	---	15.5	---	---		
MAX						.0	20.5	21.5	32.0	29.0		

WTR YR 1979 MEAN 18.5 MAX 32.0 MIN ~~-1.0~~

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-29-80

STATION NUMBER 09306240 BOX ELDER GULCH NEAR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395318 LONGITUDE 1083140 DRAINAGE AREA 9.21 DATUM 6955.00 STATE 08 COUNTY 103

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
PROVISIONAL DATA MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	4.5	---	11.0		
2							---	4.0	3.5	---		
3							---	2.5	---	---		
4							---	---	---	---		
5							---	---	---	---		
6							---	---	6.5	---		
7							---	.0	6.5	---		
8							---	1.0	5.0	---		
9							---	1.0	4.5	---		
10							---	1.5	4.0	---		
11							---	1.0	5.5	---		
12							---	---	5.5	---		
13							---	2.5	7.0	---		
14							---	---	7.5	---		
15							---	---	7.5	---		
16							3.0	5.5	5.0	---		
17							---	5.0	4.5	---		
18							1.5	6.0	7.0	---		
19							.5	---	---	---		
20							-0.5	---	4.0	---		
21							1.5	5.5	---	---		
22							1.5	---	---	---		
23							---	---	6.5	---		
24							3.5	---	6.5	---		
25							2.5	7.0	6.5	---		
26							.0	6.0	8.0	---		
27							1.0	---	7.5	---		
28							3.0	---	---	---		
29							1.0	6.0	---	---		
30							2.0	---	---	---		
31							---	3.0	---	---		
MIN							-0.5	.0	3.5	11.0		

WTR YR 1979 MEAN 4.0 MAX 11.0 MIN -0.5

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-29-80

STATION NUMBER 09306242 CORRAL GULCH NEAR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395513 LONGITUDE 1082820 DRAINAGE AREA 31.60 DATUM 6570.00 STATE 08 COUNTY 103

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
PROVISIONAL DATA
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	1420	1410	1430	1410	1370	1310	1260	1370	1330	1390
2		---	1430	1410	1350	1420	1390	1320	1370	1370	1320	1390
3		---	1440	1400	1380	1380	1430	1350	1370	1410	1320	1390
4		---	1460	1410	1410	1390	1420	---	1380	1450	1290	1380
5		---	1440	1410	1390	1390	1430	---	1400	1410	1220	1390
6		---	1440	1410	1410	1380	1450	---	1400	1380	1210	1390
7		---	1430	1400	1430	1380	1420	1360	1400	1380	1210	1400
8		---	1450	1410	1470	1390	1400	1350	1370	1420	1190	1390
9		---	1450	1410	1460	1380	1420	1370	1390	1420	1190	1390
10		---	1440	1420	1430	1350	1420	1380	1390	1430	1200	1390
11		---	1430	1410	1430	1300	1380	1380	1390	1340	1200	1390
12		---	1420	1420	1430	1270	1380	1380	1380	1350	1200	1380
13		---	1420	1400	1440	1320	1390	1390	1400	1350	1190	1380
14		1470	1430	1390	1430	513	1410	1380	1390	1360	1260	1390
15		1460	1420	1390	1310	502	1430	1350	---	1360	1370	1390
16		1430	1420	1410	1250	1390	1440	1380	---	1370	1350	1390
17		1390	1420	1400	1420	1380	1390	1360	---	1380	1330	1400
18		1420	1420	1420	1420	1360	1400	1350	---	1360	1340	1420
19		1410	1420	1400	1450	1370	1380	1340	---	1340	1350	1420
20		1400	1410	1380	1460	1380	1390	1340	---	1340	1340	1420
21		1390	1400	1400	1450	1360	1380	1310	1410	1320	1420	1420
22		1430	1420	1390	1430	1380	1360	1370	1400	1300	1410	1420
23		1390	1420	1400	1400	1410	1350	1440	1390	1330	1400	1410
24		1390	1440	1400	1390	1420	1350	1550	1370	1330	1410	1410
25		1380	1420	1410	1420	1440	1350	1670	1370	1360	1420	1410
26		1420	1420	1450	1390	1440	1350	1710	1370	1320	1410	1420
27		1380	1420	1410	1420	1420	1360	1610	1380	1280	1390	1420
28		1410	1430	1400	1410	1410	1360	1680	1390	1270	1380	1420
29		1450	1420	1400	---	1390	1340	1350	1410	1280	1380	1420
30		1440	1400	1410	---	1390	1340	1030	1380	1300	1390	1430
31		---	1400	1420	---	1380	---	1070	---	1320	1390	---
MEAN		1420	1430	1410	1410	1330	1390	1390	1380	1350	1320	1400

WTR YR 1979 MEAN 1380 MAX 1710 MIN 502

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-29-80

STATION NUMBER 09306242 CORRAL GULCH NEAR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395513 LONGITUDE 1082820 DRAINAGE AREA 31.60 DATUM 6570.00 STATE 08 COUNTY 103

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
PROVISIONAL DATA MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	9.0	6.0	9.5	13.0	16.5	18.5	20.0	18.0	27.0	22.0
2		---	7.5	7.5	9.5	14.5	16.0	17.0	20.5	19.5	23.5	21.5
3		---	7.5	8.5	8.5	16.0	16.5	14.5	20.5	19.0	27.0	21.5
4		---	9.5	9.0	9.5	16.0	16.0	---	22.0	23.5	28.5	20.5
5		---	8.0	9.5	9.0	14.5	17.0	---	22.5	25.0	29.0	22.0
6		---	6.5	8.5	10.0	16.5	18.0	---	22.0	17.5	23.5	22.0
7		---	7.0	8.0	11.0	17.0	17.5	14.0	22.0	21.5	23.0	21.0
8		---	7.0	8.5	10.5	16.5	18.5	15.0	17.0	23.5	23.0	20.5
9		---	8.0	9.0	11.5	15.5	17.5	16.5	20.5	22.0	23.5	20.5
10		---	8.5	9.0	11.0	18.0	14.5	17.5	22.0	25.5	27.0	20.5
11		---	8.5	10.0	11.0	18.0	16.5	17.5	24.5	22.5	23.0	21.5
12		---	9.0	10.0	12.5	18.0	17.5	19.0	24.5	23.5	23.0	20.5
13		---	8.0	9.0	12.0	17.5	17.0	20.0	23.5	22.5	22.5	19.5
14		8.5	9.5	8.5	10.5	27.0	18.0	20.5	21.0	22.5	20.0	19.5
15		8.5	9.0	9.0	13.0	29.0	18.5	20.0	---	22.0	20.5	19.5
16		9.0	8.0	9.5	14.5	27.5	19.0	19.0	---	22.0	19.0	20.0
17		9.0	9.0	10.5	12.5	18.0	18.5	20.5	---	22.5	20.5	20.5
18		8.5	10.0	12.0	12.0	16.0	18.0	21.0	---	24.5	21.0	20.5
19		9.0	8.0	9.5	9.5	17.0	17.5	21.0	---	23.0	20.5	20.5
20		9.5	8.5	9.5	11.5	17.0	18.0	22.0	---	21.5	18.0	20.5
21		9.0	9.0	10.5	9.5	17.0	18.5	22.0	20.0	21.0	24.0	21.0
22		8.5	9.5	8.0	9.5	15.5	19.0	22.0	20.5	21.0	22.5	20.5
23		9.0	8.5	9.0	12.5	17.0	19.0	23.0	21.0	25.5	25.0	20.5
24		8.5	9.5	9.0	14.5	17.5	18.0	19.0	22.5	23.0	25.5	22.0
25		9.5	9.0	10.0	14.5	18.0	18.5	20.0	23.5	27.5	24.0	20.5
26		9.0	8.5	7.5	14.0	17.5	19.0	22.0	22.5	25.5	23.0	20.5
27		8.5	9.5	9.0	12.5	16.5	19.0	20.5	21.5	23.0	22.5	20.5
28		8.5	8.5	9.0	14.5	16.5	18.5	20.5	24.5	23.0	26.0	20.0
29		9.0	8.5	8.0	---	15.5	20.0	19.5	22.5	23.0	22.5	20.0
30		12.0	8.5	8.0	---	16.5	19.5	20.0	20.0	23.5	21.5	20.0
31		---	7.0	8.5	---	15.5	---	19.0	---	24.0	21.0	---
MAX		12.0	10.0	12.0	14.5	29.0	20.0	23.0	24.5	27.5	29.0	22.0

WTR YR 1979 MEAN 16.5 MAX 29.0 MIN 6.0

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-29-80

STATION NUMBER 09306242 CORRAL GULCH NEAR RANGELY, CO. STREAM SOURCE AGENCY USGS
LATITUDE 395513 LONGITUDE 1082820 DRAINAGE AREA 31.60 DATUM 6570.00 STATE 08 COUNTY 103

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
PROVISIONAL DATA
MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	6.0	2.5	4.0	4.0	13.0	12.0	13.0	10.0	14.5	16.5
2		---	4.0	2.5	4.5	9.5	11.0	12.5	13.5	10.0	15.5	15.5
3		---	3.5	4.5	3.5	10.0	10.5	13.0	14.0	10.0	13.5	16.5
4		---	6.0	1.5	3.0	10.0	12.5	---	15.0	12.5	15.0	16.5
5		---	4.5	6.5	3.5	10.5	11.5	---	15.0	10.5	15.5	16.0
6		---	4.5	6.5	6.0	13.0	11.0	---	15.5	10.0	16.5	15.5
7		---	2.5	4.5	5.0	12.5	10.5	13.0	15.5	9.5	12.5	15.5
8		---	2.5	3.5	5.5	11.5	13.0	11.5	14.0	9.5	17.0	16.5
9		---	4.5	4.5	5.0	11.0	13.5	11.0	13.5	10.5	16.5	16.5
10		---	4.0	7.0	5.5	10.5	13.5	12.0	13.5	11.5	15.5	17.5
11		---	4.5	7.5	6.0	9.5	12.5	12.0	14.0	16.5	14.5	15.5
12		---	5.5	7.0	7.5	10.5	12.5	---	13.5	14.5	16.0	15.5
13		---	4.0	5.5	7.5	12.0	12.5	13.0	13.0	16.5	16.5	15.5
14		7.0	5.0	5.0	7.0	11.5	13.0	13.5	16.5	17.0	16.0	15.0
15		6.0	5.0	5.0	6.5	22.5	13.5	12.5	---	16.5	15.0	13.0
16		5.5	3.0	7.0	6.5	12.5	13.0	13.0	---	17.5	17.0	15.0
17		5.0	4.5	6.5	5.0	12.0	13.0	13.5	---	17.0	16.5	15.0
18		5.0	8.0	8.0	4.5	12.5	13.5	14.5	---	16.5	16.5	14.0
19		5.0	7.0	6.0	5.5	13.0	12.0	13.5	---	15.0	12.5	14.5
20		5.5	4.5	5.5	6.0	13.0	12.0	14.5	---	15.5	12.0	15.0
21		6.0	5.5	4.0	6.0	10.5	12.0	14.0	15.5	16.0	10.0	14.5
22		5.5	5.5	5.0	6.0	12.0	11.5	14.5	15.5	16.0	10.5	13.5
23		4.5	5.5	4.5	5.0	12.5	11.5	14.0	16.0	16.5	10.0	14.0
24		4.0	4.0	2.5	7.5	13.0	12.0	15.0	15.0	16.0	10.5	14.0
25		5.0	5.0	7.0	6.5	13.0	12.0	16.5	15.0	15.5	11.0	14.0
26		6.0	4.5	4.0	8.5	13.5	11.0	16.0	15.5	15.5	12.0	15.0
27		4.0	5.5	3.0	8.0	14.0	11.5	13.0	15.5	16.0	9.5	14.0
28		4.0	6.0	3.5	6.0	11.5	12.5	16.5	12.5	16.0	12.0	13.5
29		5.5	5.5	4.5	---	13.5	11.5	15.0	11.0	16.0	10.5	13.5
30		6.0	4.5	2.5	---	12.5	12.0	13.5	10.0	15.5	14.5	13.5
31		---	3.5	4.0	---	13.0	---	13.0	---	15.5	15.5	---
MIN		4.0	2.5	1.5	3.0	4.0	10.5	11.0	10.0	9.5	9.5	13.0

WTR YR 1979 MEAN 10.5 MAX 22.5 MIN 1.5

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-29-80

STATION NUMBER 09306255 YELLOW CREEK NEAR WHITE RIVER, CO. STREAM SOURCE AGENCY USGS
LATITUDE 401007 LONGITUDE 1082402 DRAINAGE AREA 262.00 DATUM 5535.00 STATE 08 COUNTY 103

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
PROVISIONAL DATA
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	4210	466		---	1570	1630	2380	---	3030	2590
2		---	4280	1040		---	1610	1630	2140	---	3030	2490
3		---	4490	1640		---	1600	1800	1920	3240	3050	2300
4		---	4620	1680		---	1620	2830	1700	3290	3040	2410
5		---	4540	---		---	---	2200	1510	3310	3010	2680
6		---	4180	---		---	---	2680	1780	3270	3000	2640
7		---	4030	---		---	---	2220	2400	3280	2970	2590
8		---	4190	---		---	---	1680	2270	4630	2950	2450
9		4080	2160	---		---	---	1940	2030	4740	2970	2330
10		4390	---	---		---	---	2040	1900	3340	2950	2110
11		3550	---	---		---	---	2080	1800	3300	2880	2260
12		4160	---	---		11000	---	1990	---	3280	2870	2630
13		4430	---	---		---	3460	1980	---	3190	2820	2600
14		4480	2730	---		---	3500	1990	---	3120	2800	2610
15		4480	2760	---		7610	3470	2450	---	3240	2780	2630
16		4500	1350	---		7110	3370	2800	---	3230	2020	2620
17		4500	982	---		2660	3280	2900	---	3200	2820	2630
18		---	976	---		2600	3370	---	---	3220	2820	2590
19		4500	997	---		2330	3120	2030	---	3200	2670	2640
20		4480	---	---		2450	2760	3160	---	3190	2560	2630
21		4490	---	---		2250	2020	3120	---	2130	2720	2610
22		4480	---	---		1520	1620	2940	---	2080	2750	2630
23		4610	---	---		2360	1500	3250	---	2890	2760	2610
24		4590	---	---		2070	2310	3030	---	3060	2740	2610
25		4410	---	---		1990	3050	2600	---	3030	2710	2570
26		4280	---	---		1890	3040	2790	---	3110	2690	2340
27		4400	1520	---		2580	2900	---	---	3060	2680	2600
28		4660	895	---		2260	3220	---	---	2890	2690	---
29		4500	794	---		2950	2630	---	---	3100	2700	---
30		4200	725	---		2890	1640	---	---	3060	2700	---
31		---	541	---		2150	---	1540	---	3050	2650	---
MEAN		4390	2550	1210		3370	2580	2360	1980	3200	2800	2530

WTR YR 1979 MEAN 2850 MAX 11000 MIN 466

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-29-80

STATION NUMBER 09306255 YELLOW CREEK NEAR WHITE RIVER, CO. STREAM SOURCE AGENCY USGS
LATITUDE 401007 LONGITUDE 1082402 DRAINAGE AREA 262.00 DATUM 5535.00 STATE 08 COUNTY 103

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
PROVISIONAL DATA MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	.5	-1.0		---	11.5	15.5	24.5	---	29.0	26.5
2		---	.5	-1.5		---	12.5	16.0	24.5	---	29.5	26.0
3		---	.5	-1.5		---	14.5	10.0	23.0	22.5	29.5	24.5
4		---	.5	-1.5		---	10.0	20.0	27.0	27.0	30.0	25.5
5		---	.5	---		---	---	18.5	28.0	26.0	27.0	25.0
6		---	.5	---		---	---	14.5	25.5	22.0	29.5	26.5
7		---	.5	---		---	---	8.5	19.5	28.5	28.5	25.0
8		---	.5	---		---	---	10.5	24.0	12.0	29.5	25.0
9		16.0	.0	---		---	---	11.5	25.5	24.5	31.0	23.0
10		4.0	.0	---		---	---	14.5	27.5	29.5	28.5	23.5
11		2.0	-1.0	---		---	---	14.0	28.0	30.0	23.0	25.0
12		2.5	-1.0	---		6.5	---	22.5	---	29.5	27.0	24.0
13		2.5	6.5	---		6.5	16.5	23.5	---	28.5	20.0	18.5
14		3.0	5.5	---		6.5	22.5	24.0	---	29.5	22.0	22.0
15		3.0	3.5	---		6.0	35.5	23.5	---	28.5	18.5	22.5
16		3.0	3.5	---		5.5	22.5	21.0	---	29.0	20.5	22.5
17		2.5	---	---		7.5	19.0	24.0	---	29.5	21.0	23.0
18		1.5	---	---		9.0	17.5	24.5	---	29.5	22.0	23.5
19		1.0	---	---		8.5	13.5	26.5	---	26.5	21.0	23.0
20		1.0	1.5	---		12.5	16.5	27.0	---	28.0	20.0	22.5
21		1.0	1.0	---		8.0	20.0	27.5	---	22.0	26.0	23.0
22		1.0	1.0	---		7.5	20.0	27.0	---	26.5	27.5	22.5
23		1.0	1.0	---		20.5	20.5	28.0	---	28.0	27.0	22.5
24		1.0	1.0	---		13.5	16.5	23.0	---	30.5	27.5	22.5
25		.5	.5	---		12.5	21.0	26.0	---	30.0	27.5	21.5
26		.5	.5	---		14.0	20.0	29.0	---	28.0	27.5	19.0
27		.5	.0	---		9.5	22.0	26.0	---	28.5	25.0	23.0
28		.5	.0	---		6.5	18.5	24.5	---	29.0	24.0	---
29		.5	.0	---		7.0	20.5	21.0	---	28.0	26.0	---
30		.5	-0.5	---		9.5	18.5	22.5	---	29.5	21.0	---
31		---	-0.5	---		9.0	---	23.5	---	29.0	24.5	---
MAX		16.0	6.5	-1.0		20.5	35.5	29.0	28.0	30.5	31.0	26.5

WTR YR 1979 MEAN 17.0 MAX 35.5 MIN -1.5

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE IS 01-29-80

STATION NUMBER 09306255 YELLOW CREEK NEAR WHITE RIVER, CO. STREAM SOURCE AGENCY USGS
LATITUDE 401007 LONGITUDE 1082402 DRAINAGE AREA 262.00 DATUM 5535.00 STATE 08 COUNTY 103

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
PROVISIONAL DATA MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	.5	-1.5		---	3.5	8.5	4.0	---	9.0	6.5
2		---	.5	---		---	2.0	7.5	4.5	---	9.0	7.5
3		---	.5	---		---	2.0	7.0	5.5	13.5	8.5	7.5
4		---	.5	---		---	2.0	5.0	8.0	9.0	8.5	7.5
5		---	.5	---		---	---	7.0	8.0	8.0	9.5	6.5
6		---	.5	---		---	---	6.5	9.0	9.5	12.0	6.5
7		---	.5	---		---	---	4.5	5.5	9.0	14.0	6.5
8		---	.0	---		---	---	4.5	5.5	9.5	15.0	8.5
9		4.5	-0.5	---		---	---	2.0	7.5	10.5	14.5	8.5
10		1.0	-1.0	---		---	---	3.5	8.5	8.5	9.5	12.0
11		1.0	---	---		---	---	4.0	9.0	9.0	11.0	8.5
12		1.0	---	---		2.5	---	3.5	---	10.5	13.5	6.5
13		1.0	---	---		1.5	6.0	4.5	---	9.5	11.5	4.0
14		1.0	3.0	---		1.5	2.5	5.5	---	11.0	10.0	5.5
15		.5	2.5	---		2.0	4.5	6.5	---	12.0	14.0	2.5
16		.5	---	---		3.5	6.5	7.5	---	11.5	12.5	3.0
17		.5	---	---		4.0	6.5	6.5	---	11.0	8.5	3.0
18		---	---	---		2.5	5.5	8.5	---	10.0	11.0	4.5
19		.5	---	---		3.0	6.5	7.0	---	11.0	11.5	5.0
20		.5	---	---		3.0	3.5	6.5	---	17.5	11.5	8.0
21		.5	1.0	---		3.0	5.0	8.5	---	12.0	8.5	6.5
22		.5	1.0	---		1.5	3.0	7.5	---	12.5	9.0	6.5
23		.5	.5	---		.5	4.5	8.0	---	12.5	8.5	5.5
24		.5	.5	---		1.0	6.5	9.5	---	12.0	10.0	6.5
25		.5	.5	---		1.5	5.5	11.5	---	11.0	8.5	6.5
26		.5	.0	---		2.0	2.0	9.0	---	11.0	8.5	9.0
27		.5	-0.5	---		5.0	1.5	8.5	---	12.0	8.5	7.0
28		.5	-0.5	---		2.0	6.5	10.5	---	13.0	10.0	---
29		.5	-0.5	---		3.5	4.0	9.5	---	9.5	7.5	---
30		.5	-0.5	---		4.0	6.0	5.0	---	8.5	7.5	---
31		---	-1.0	---		2.5	---	9.5	---	9.0	9.0	---
MIN		.5	-1.0	-1.5		.5	1.5	2.0	4.0	8.0	7.5	2.5

WTR YR 1979 MEAN 6.0 MAX 17.5 MIN -1.5

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

APPENDIX 5-1.2

U.S. Geological Survey Surface Gaging Stations
Water Quality Data

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 11/15/79
09306235 - CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	SULFIDE TOTAL (MG/L AS S)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	SODIUM PERCENT
OCT												
24...	--	--	--	--	--	470	--	97	55	150	3.0	38
NOV												
21...	--	--	--	--	--	460	--	87	58	82	1.7	28
DEC												
04...	--	--	--	--	--	470	--	91	59	83	1.7	28
JAN												
24...	--	--	--	--	--	490	--	93	62	83	1.6	27
FEB												
22...	--	--	--	--	--	460	--	92	57	83	1.7	28
MAR												
12...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
03...	--	--	--	--	--	360	360	68	46	67	1.5	29
24...	.00	7.6	.5	.00	.5	440	120	75	60	85	1.8	30
MAY												
08...	--	--	--	--	--	460	--	86	60	77	1.6	27
JUN												
25...	--	--	--	--	--	400	--	70	55	75	1.6	29

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 11/15/79
09306235 - CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	LITHIUM DIS-SOLVED (UG/L AS LI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)
OCT												
24...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
04...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
12...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
03...	--	--	--	--	--	--	--	--	--	--	--	--
24...	0	10	0	1	39	0	2000	3.3	<3	0	20	3
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
25...	--	--	--	--	--	--	--	--	--	--	--	--

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 11/15/79
09306235 - CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	TEMPERATURE (DEG. C)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	WEATHER (WMO CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	TURBIDITY (NTU)	COLOR (PLATINUM-COBALT UNITS)	SPECIFIC CONDUCTANCE (MICROMHOS)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	PH (UNITS)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)
OCT												
24...	0830	2.5	80020	--	.32	--	--	1700	10.6	--	8.2	--
NOV												
21...	1030	1.5	80020	--	.24	--	--	1100	10.8	--	8.0	--
DEC												
04...	0940	2.0	80020	--	.25	--	--	1100	10.2	--	8.3	--
JAN												
24...	1000	.5	80020	--	.04	--	--	1100	12.6	--	8.3	--
FEB												
22...	1300	1.0	80020	--	.16	--	--	1125	11.2	--	8.3	--
MAR												
12...	1235	--	80010	--	--	--	--	--	--	--	--	--
APR												
03...	1130	1.0	80020	1	--	--	--	900	10.8	--	8.1	--
24...	0845	9.0	80020	--	--	1.0	0	1075	10.6	19	7.8	9.9
MAY												
08...	1035	9.0	80020	--	--	--	--	1000	10.7	--	8.4	--
JUN												
25...	1100	21.0	80020	--	--	--	--	1080	7.5	--	8.3	--

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 11/15/79
09306235 - CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ALKALINITY (MG/L AS CACO3)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L)	NITROGEN, DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	PHOSPHATE, TOTAL (MG/L AS PO4)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	PHOSPHORUS, TOTAL (MG/L AS P)
OCT												
24...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
04...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
12...	--	--	--	0	--	--	--	--	--	--	--	--
APR												
03...	--	--	--	--	--	--	--	--	--	--	--	--
24...	323	390	0	0	1.3	.30	.01	.31	1.0	.03	.00	.01
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
25...	--	--	--	--	--	--	--	--	--	--	--	--

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY — PROCESS DATE 11/15/79
09306235 - CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	POTASSIUM, DIS-SOLVED (MG/L AS K)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYLLIUM, DIS-SOLVED (UG/L AS BE)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHROMIUM, DIS-SOLVED (UG/L AS CR)
OCT												
24...	--	56	150	310	.3	22	--	--	--	--	--	--
NOV												
21...	--	1.1	7.6	300	.2	24	--	--	--	--	--	--
DEC												
04...	--	1.5	7.8	280	.3	22	--	--	--	--	--	--
JAN												
24...	--	1.2	7.4	280	.2	22	--	--	--	--	--	--
FEB												
22...	--	.9	6.7	260	.2	19	--	--	--	--	--	--
MAR												
12...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
03...	--	.8	5.8	230	.2	16	--	--	--	--	--	--
29...	86	1.1	7.9	280	2.1	22	4	60	<1	100	<1	0
MAY												
08...	--	1.4	6.2	260	.3	22	--	--	--	--	--	--
JUN												
25...	--	1.2	6.8	280	.3	21	--	--	--	--	--	--

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY — PROCESS DATE 11/15/79
09306235 - CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ODOR, ATMOSPHERIC (SEVERITY)	GROSS ALPHA, DIS-SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)	PERTHANE TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)
OCT												
24...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
04...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
12...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
03...	0	--	--	--	--	--	--	--	--	--	--	--
29...	--	<9.5	.5	<5.0	.8	.10	K80	K8	9	.00	.00	.00
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
25...	--	--	--	--	--	--	--	--	--	--	--	--

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 11/15/79
09306235 - CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ENDRIN TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)
OCT												
24...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
04...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
12...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
03...	--	--	--	--	--	--	--	--	--	--	--	--
24...	.00	.0	.00	.00	.00	.00	.00	.00	.00	0	.00	.00
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
25...	--	--	--	--	--	--	--	--	--	--	--	--

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 11/15/79
09306235 - CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	PCB, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)	DIAZINON, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	MIREX, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	TOTAL TRITHION (UG/L)	METHYL TRITHION, TOTAL (UG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
OCT												
24...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
04...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
12...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
03...	--	--	--	--	--	--	--	--	--	--	--	434
24...	.0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	732
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
25...	--	--	--	--	--	--	--	--	--	--	--	--

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 11/15/79
09306235 - CORRAL GULCH BELOW WATER GULCH, NR RANGELY, CO. DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	BROMIDE DIS-SOLVED (MG/L AS BR)	PHOS-PHORUS TOTAL (MG/L AS PO4)	MERCURY DIS-SOLVED (UG/L AS HG)	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)
OCT										
24...	--	--	--	--	--	--	--	--	--	--
NOV										
21...	--	--	--	--	--	--	--	--	--	--
DEC										
04...	--	--	--	--	--	--	--	--	--	--
JAN										
24...	--	--	--	--	--	--	--	--	--	--
FEB										
22...	--	--	--	--	--	--	--	--	--	--
MAR										
12...	--	--	--	--	--	--	--	--	--	--
APR										
03...	.59	--	--	--	--	--	--	--	--	--
24...	1.00	.01	.1	.03	.0	6.3	<14	.8	<4.4	.8
MAY										
08...	--	--	--	--	--	--	--	--	--	--
JUN										
25...	--	--	--	--	--	--	--	--	--	--

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY — PROCESS DATE 11/15/79
09306240 - BOX ELDER GULCH NEAR RANGELY, CO. — DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	TEMPERATURE (DEG C)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	TURBIDITY (NTU)	SPECIFIC CONDUCTANCE (MICROMHOS)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	PH (UNITS)	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
APR												
18...	1430	17.0	80020	1.4	590	900	7.7	150	8.7	0	13	43
MAY												
08...	1215	9.0	80020	--	--	850	9.2	--	8.5	--	--	--
JUN												
25...	1300	26.0	80020	--	--	800	6.5	--	8.1	--	--	--

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CYANIDE TOTAL (MG/L AS CN)	SULFIDE TOTAL (MG/L AS S)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	SODIUM PERCENT	SODIUM, POTASSIUM DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)
APR											
18...	.00	.0	430	430	91	50	59	1.2	23	60	1.0
MAY											
08...	--	--	370	--	66	49	52	1.2	24	--	.8
JUN											
25...	--	--	310	--	53	44	57	1.4	28	--	.9

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DATE	CHLORIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYLLIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHROMIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
APR											
18...	5.8	200	.4	21	10	100	0	0	0	2	10
MAY											
08...	5.5	170	.3	23	--	--	--	--	--	--	--
JUN											
25...	6.6	180	.3	22	--	--	--	--	--	--	--

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DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	STRONTIUM, DIS-SOLVED (UG/L AS SR)	VANADIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	ALUMINUM, DIS-SOLVED (UG/L AS AL)	LITHIUM DIS-SOLVED (UG/L AS LI)	SELENIUM, DIS-SOLVED (UG/L AS SE)	GROSS ALPHA, DIS-SOLVED (PCI/L AS U-NAT)
APR											
18...	0	10	35	0	1300	4.7	10	20	4	4	<8.2
MAY											
08...	--	--	--	--	--	--	--	--	--	--	--
JUN											
25...	--	--	--	--	--	--	--	--	--	--	--

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DATE	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	PER- THANE TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)
APR											
18...	15	<4.5	57	.10	K280	80	480	1	.10	.00	.00
MAY											
08...	--	--	--	--	--	--	--	--	--	--	--
JUN											
25...	--	--	--	--	--	--	--	--	--	--	--

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DATE	LINDANE TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)
APR											
18...	.00	.0	.00	.00	.00	.00	.00	.00	.00	0	.00
MAY											
08...	--	--	--	--	--	--	--	--	--	--	--
JUN											
25...	--	--	--	--	--	--	--	--	--	--	--

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	MIREX, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	TOTAL THI-THION (UG/L)
APR											
18...	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00	.00
MAY											
08...	--	--	--	--	--	--	--	--	--	--	--
JUN											
25...	--	--	--	--	--	--	--	--	--	--	--

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DATE	METHYL THI-THION, TOTAL (UG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	BROMIDE DIS-SOLVED (MG/L AS BR)	MERCURY DIS-SOLVED (UG/L AS HG)	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP, TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP, TOTAL (PCI/L AS SR/YT-90)
APR											
18...	.00	410	1.6	.58	.1	.1	4.2	<12	110	<4.1	49
MAY											
08...	--	--	--	--	--	--	--	--	--	--	--
JUN											
25...	--	--	--	--	--	--	--	--	--	--	--

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	TEMPERATURE (DEG C)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	WEATHER (WMO CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	TURBIDITY (NTU)	COLOR (PLATINUM-COBALT UNITS)	SPECIFIC CONDUCTANCE (MICROMHOS)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	PH (UNITS)
OCT												
24...	1000	9.0	80020	--	3.2	--	--	1400	9.5	--	--	7.9
NOV												
21...	1120	8.0	80020	--	1.6	--	--	1500	9.8	--	--	7.7
DEC												
06...	1215	5.5	80020	--	1.3	--	--	1450	9.0	--	--	7.5
JAN												
24...	1150	7.0	80020	--	2.1	--	--	1450	9.6	--	--	7.8
FEB												
22...	1520	8.0	80020	--	2.0	--	--	1500	7.2	--	--	7.8
APR												
03...	1540	7.0	80020	1	--	--	--	1480	7.1	--	--	8.1
06...	1420	16.5	80020	--	--	--	--	1390	5.6	--	--	7.8
24...	0955	13.5	80020	--	--	6.0	5	1350	7.0	2.4	44	7.7
MAY												
08...	1330	13.5	80020	--	--	--	--	1060	7.1	--	--	8.1
JUN												
25...	1340	20.5	80020	--	--	--	--	1400	6.5	--	--	7.8

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DATE	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	ALKALINITY (MG/L AS CaCO3)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)
OCT												
24...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
06...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
03...	--	--	--	--	--	--	--	--	--	--	--	--
06...	14	450	550	0	--	1.2	.63	.71	.18	.28	.29	.04
24...	16	410	500	0	0	--	1.5	--	.60	.06	--	--
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
25...	--	--	--	--	--	--	--	--	--	--	--	--

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DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHATE, TOTAL (MG/L AS PO4)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
OCT												
24...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
06...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
03...	--	--	--	--	--	--	--	--	--	--	--	--
06...	.12	.46	1.0	.16	.17	--	.00	.20	.01	.00	18	4.4
24...	--	.66	--	--	.84	1.0	.00	.34	--	.00	--	8.2
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
25...	--	--	--	--	--	--	--	--	--	--	--	--

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DATE	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	SULFIDE TOTAL (MG/L AS S)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO	SODIUM PERCENT	SODIUM, POTAS-SIUM DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
OCT												
24...	--	--	--	440	--	58	71	180	3.7	47	--	1.9
NOV												
21...	--	--	--	520	--	80	78	150	2.9	38	--	1.3
DEC												
06...	--	--	--	530	--	82	78	170	3.2	41	--	1.8
JAN												
24...	--	--	--	480	--	65	78	170	3.4	43	--	1.6
FEB												
22...	--	--	--	510	--	72	79	170	3.3	42	--	1.0
APR												
03...	--	--	--	430	--	48	75	180	3.8	48	--	.5
06...	--	--	--	400	0	40	73	190	4.1	51	--	.5
24...	1.4	.00	.4	420	14	52	70	140	3.0	42	140	.7
MAY												
08...	--	--	--	400	--	68	56	85	1.8	32	--	1.2
JUN												
25...	--	--	--	420	--	62	64	130	2.8	40	--	1.2

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DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
OCT												
24...	11	330	1.0	31	--	--	--	--	--	--	--	--
NOV												
21...	10	400	.5	23	--	--	--	--	--	--	--	--
DEC												
06...	18	--	.5	22	--	--	--	--	--	--	--	--
JAN												
24...	11	380	.8	27	--	--	--	--	--	--	--	--
FEB												
22...	11	400	.8	23	--	--	--	--	--	--	--	--
APR												
03...	9.9	370	1.2	25	--	--	--	--	--	--	--	--
06...	9.3	350	1.3	25	--	--	--	160	--	--	--	90
24...	8.2	310	.9	24	7	90	<1	130	<1	0	0	10
MAY												
08...	7.4	240	.4	22	--	--	--	--	--	--	--	--
JUN												
25...	14	350	.7	22	--	--	--	--	--	--	--	--

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DATE	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	LITHIUM DIS-SOLVED (UG/L AS LI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	GROSS ALPHA, DIS-SOLVED (PCI/L AS U-NAT)	GROSS ALPHA, SUSP, TOTAL (PCI/L AS U-NAT)
OCT												
24...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
06...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
03...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
24...	0	10	40	0	5000	1.7	<3	0	60	1	<11	29
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
25...	--	--	--	--	--	--	--	--	--	--	--	--

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DATE	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	PHENOLS (UG/L)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L)	PER-THANE TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)
OCT												
24...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
06...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
04...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
24...	<5.9	17	.13	K80	<1	5	.00	.00	.00	.00	.0	.00
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
25...	--	--	--	--	--	--	--	--	--	--	--	--

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DATE	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)
OCT												
24...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
06...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
03...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
24...	.00	.00	.00	.00	.00	.00	0	.00	.00	.0	.00	.00
MAY												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
25...	--	--	--	--	--	--	--	--	--	--	--	--

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DATE	DI-AZINON, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	MIREX, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3)
OCT												
24...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
21...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
06...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
03...	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--	--	--	--	--
24...	.00	.00	.00	.00	.00	.00	.00	.00	961	1.31	.36	.53
MAY									862	1.17	.08	--
08...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
25...	--	--	--	--	--	--	--	--	--	--	--	--

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY — PROCESS DATE 11/15/79
09306242 - CORRAL GULCH NEAR RANGELY, CO. — DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2)	BROMIDE DIS-SOLVED (MG/L AS BR)	PHOS-PHORUS TOTAL (MG/L AS PO4)	NITRO-GEN, TOTAL (MG/L AS NO3)	MERCURY DIS-SOLVED (UG/L AS HG)	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP, TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP, TOTAL (PCI/L AS SR/YT-90)
OCT										
24...	--	--	--	--	--	--	--	--	--	--
NOV										
21...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	--	--	--	--	--	--	--	--	--	--
JAN										
24...	--	--	--	--	--	--	--	--	--	--
FEB										
22...	--	--	--	--	--	--	--	--	--	--
APR										
03...	--	--	--	--	--	--	--	--	--	--
06...	.16	--	--	5.1	--	--	--	--	--	--
24...	--	.1	1.0	--	.2	3.3	<16	42	<5.4	14
MAY										
08...	--	--	--	--	--	--	--	--	--	--
JUN										
25...	--	--	--	--	--	--	--	--	--	--

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY — PROCESS DATE 11/15/79
09380255 - YELLOW CREEK NEAR WHITE RIVER, CO. — DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	TEMPERATURE (DEG C)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	PH (UNITS)	ALKALINITY (MG/L AS CaCO3)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	HARDNESS (MG/L AS CACO3)
OCT											
25...	1320	13.5	80020	.30	4200	9.5	--	8.4	--	--	320
NOV											
22...	0900	.5	80020	.70	4600	14.2	--	8.3	--	--	700
DEC											
06...	0940	.5	80020	.60	4400	10.8	--	8.0	--	--	520
JAN											
24...	1515	.0	80020	.02	5200	11.0	--	8.5	--	--	570
FEB											
21...	1000	.5	80020	.18	4500	12.2	--	8.8	--	--	480
MAR											
28...	0940	2.0	80020	11	1800	11.4	--	8.6	--	--	220
APR											
25...	1300	--	80020	--	--	--	2.1	--	--	--	--
MAY											
09...	1130	10.5	80020	3.0	3800	8.4	--	8.7	--	--	570
JUN											
27...	1540	29.5	80020	--	4100	6.5	--	8.7	--	--	440
JUL											
17...	1000	27.5	80020	--	3650	8.5	--	8.5	1530	13	460

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY — PROCESS DATE 11/15/79
09380255 - YELLOW CREEK NEAR WHITE RIVER, CO. — DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM ADSORPTION RATIO	SODIUM PERCENT	SODIUM, POTASSIUM DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	CHLORIDE, DISSOLVED (MG/L AS CL)	SULFATE DISSOLVED (MG/L AS SO4)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT											
25...	--	47	50	900	22	86	--	5.5	210	550	2.5
NOV											
22...	--	100	110	1000	16	75	--	6.1	210	610	2.8
DEC											
06...	--	28	110	990	19	88	--	7.1	180	110	2.9
JAN											
24...	--	32	120	1200	22	82	--	8.6	220	580	2.6
FEB											
21...	--	27	100	1000	20	82	--	5.5	100	380	2.9
MAR											
28...	--	16	31	370	11	78	--	3.3	63	310	1.4
APR											
25...	--	--	--	--	--	--	--	--	--	--	--
MAY											
09...	570	46	110	650	12	71	650	4.3	110	600	1.7
JUN											
27...	440	12	100	880	18	81	880	4.3	140	640	2.6
JUL											
17...	0	19	100	830	17	80	830	4.3	140	580	2.6

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY — PROCESS DATE 11/15/79
09306255 - YELLOW CREEK NEAR WHITE RIVER, CO. — DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	BORON, DIS-SOLVED (UG/L AS B)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	PER-THANE TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	LINDANE TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)
OCT											
24...	10	--	--	--	--	--	--	--	--	--	--
NOV											
22...	11	--	--	--	--	--	--	--	--	--	--
DEC											
06...	11	--	--	--	--	--	--	--	--	--	--
JAN											
24...	11	--	--	--	--	--	--	--	--	--	--
FEB											
23...	10	--	--	--	--	--	--	--	--	--	--
MAR											
28...	6.5	--	--	--	--	--	--	--	--	--	--
APR											
24...	--	--	K100	.00	.00	.00	.0	.00	.00	.00	.00
MAY											
09...	10	--	--	--	--	--	--	--	--	--	--
JUN											
27...	6.7	--	--	--	--	--	--	--	--	--	--
JUL											
17...	9.4	810	--	--	--	--	--	--	--	--	--

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY — PROCESS DATE 11/15/79
09306255 - YELLOW CREEK NEAR WHITE RIVER, CO. — DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ENDO-SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	PCB, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)
OCT										
24...	--	--	--	--	--	--	--	--	--	--
NOV										
22...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	--	--	--	--	--	--	--	--	--	--
JAN										
24...	--	--	--	--	--	--	--	--	--	--
FEB										
23...	--	--	--	--	--	--	--	--	--	--
MAR										
28...	--	--	--	--	--	--	--	--	--	--
APR										
24...	.00	.00	.00	0	.00	.00	.0	.00	.00	.00
MAY										
09...	--	--	--	--	--	--	--	--	--	--
JUN										
27...	--	--	--	--	--	--	--	--	--	--
JUL										
17...	--	--	--	--	--	--	--	--	--	--

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY
09306255 - YELLOW CREEK NEAR WHITE RIVER, CO.

PROCESS DATE 11/15/79
DISTRICT CODE 08

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	METHYL PARA-THION, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	MIREX, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER DAY)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
OCT										
24...	--	--	--	--	--	--	--	--	--	--
NOV										
22...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	--	--	--	--	--	--	--	--	--	--
JAN										
24...	--	--	--	--	--	--	--	--	--	--
FEB										
23...	--	--	--	--	--	--	--	--	--	--
MAR										
28...	--	--	--	--	--	--	--	--	--	--
APR										
24...	.00	.00	.00	.00	.00	.00	.00	--	--	--
MAY										
09...	--	--	--	--	--	--	--	1530	14	2.08
JUN										
27...	--	--	--	--	--	--	--	1790	--	2.43
JUL										
17...	--	--	--	--	--	--	--	2610	--	3.55

APPENDIX 5-1.3

U.S. Geological Survey Surface Gaging Station
Water Quality Data
Individual Statistical Summary

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
410 ALKALINITY	1	320.000	320.000	320.000	0.000	0.000	0.000	0
1106 ALUMINUM	1	0.000	0.000	0.000	0.000	0.000	0.000	0
71846 AMMONIA	1	0.010	0.010	0.010	0.000	0.000	0.000	0
1000 ARSENIC	1	4.000	4.000	4.000	0.000	0.000	0.000	0
1005 BARIUM	1	60.000	60.000	60.000	0.000	0.000	0.000	0
1010 BERYLLIUM	1	-1.000	-1.000	1.000	0.000	0.000	0.000	1
440 BICARBONATE	1	390.000	390.000	390.000	0.000	0.000	0.000	0
1020 BORON	1	100.000	100.000	100.000	0.000	0.000	0.000	0
71870 BROMIDE	1	0.100	0.100	0.100	0.000	0.000	0.000	0
1025 CADMIUM	1	-1.000	-1.000	1.000	0.000	0.000	0.000	1
915 CALCIUM	7	68.000	93.000	81.510	1.145	66.409	100.045	0
445 CARBONATE	1	0.000	0.000	0.000	0.000	0.000	0.000	0
940 CHLORIDE	7	5.800	7.900	6.903	1.123	5.791	8.230	0
1030 CHROMIUM	1	0.000	0.000	0.000	0.000	0.000	0.000	0
340 COD	1	19.000	19.000	19.000	0.000	0.000	0.000	0
80 COLOR	1	0.000	0.000	0.000	0.000	0.000	0.000	0
95 SPECIFIC CONDUCTANCE	7	900.000	1120.000	1051.649	1.081	935.043	1182.797	0
1040 COPPER	1	0.000	0.000	0.000	0.000	0.000	0.000	0
720 CYANIDE-TOTAL	1	0.000	0.000	0.000	0.000	0.000	0.000	0
300 DISSOLVED OXYGEN	7	7.500	12.600	10.407	1.173	8.179	13.243	0
950 FLUORIDE	7	0.200	2.100	0.333	2.310	0.094	1.182	0
900 HARDNESS-TOTAL	7	360.000	490.000	437.900	1.113	372.270	515.101	0
1045 IRON	1	10.000	10.000	10.000	0.000	0.000	0.000	0
1049 LEAD	1	0.000	0.000	0.000	0.000	0.000	0.000	0
1130 LITHIUM	1	20.000	20.000	20.000	0.000	0.000	0.000	0
925 MAGNESIUM	7	46.000	62.000	54.765	1.106	48.753	66.092	0
1055 MANGANESE	1	1.000	1.000	1.000	0.000	0.000	0.000	0
38260 MBAS	1	0.000	0.000	0.000	0.000	0.000	0.000	0
71890 MERCURY	1	0.000	0.000	0.000	0.000	0.000	0.000	0
1060 MOLYBDENUM	1	39.000	39.000	39.000	0.000	0.000	0.000	0
1065 NICKEL	1	0.000	0.000	0.000	0.000	0.000	0.000	0
631 NITRITE + NITRATE	1	1.000	1.000	1.000	0.000	0.000	0.000	0
608 AMMONIA NITROGEN	1	0.010	0.010	0.010	0.000	0.000	0.000	0
607 ORGANIC NITROGEN	1	0.300	0.300	0.300	0.000	0.000	0.000	0
1330 ODOR	1	0.000	0.000	0.000	0.000	0.000	0.000	0
681 ORGANIC CARBON-DISSOLVED	1	7.600	7.600	7.600	0.000	0.000	0.000	0
689 ORGANIC CARBON-SUSPENDED	1	0.500	0.500	0.500	0.000	0.000	0.000	0
400 PH	7	7.800	8.400	8.214	0.204	8.214	8.522	0
32730 PHENOLICS	1	9.000	9.000	9.000	0.000	0.000	0.000	0
660 ORTHO PHOSPHATE	1	0.000	0.000	0.000	0.000	0.000	0.000	0
671 DISSOLVED ORTHOPHOSPHORUS	1	0.000	0.000	0.000	0.000	0.000	0.000	0
665 TOTAL PHOSPHORUS	1	0.010	0.010	0.010	0.000	0.000	0.000	0
935 POTASSIUM	7	0.800	1.500	1.133	1.253	0.805	1.594	0
1515 GROSS ALPHA-PC/L AS U-NATURAL	1	-9.500	-9.500	9.500	0.000	0.000	0.000	1
30030 GROSS ALPHA-UG/L AS U NAT	1	-14.000	-14.000	14.000	0.000	0.000	0.000	1
30050 GROSS BETA-PC/L AS SR90	1	-4.400	-4.400	4.400	0.000	0.000	0.000	1
9515 GROSS BETA-PC/L AS CS 137	1	-5.000	-5.000	5.000	0.000	0.000	0.000	1
1145 SELENIUM	1	3.000	3.000	3.000	0.000	0.000	0.000	0
955 SILICA	7	16.000	22.000	20.450	1.128	17.031	24.554	0
930 SODIUM	7	67.000	85.000	78.774	1.083	67.230	87.546	0
931 SODIUM ABSORPTION RATIO	7	1.500	1.800	1.740	1.061	1.500	1.774	0
70301 DISSOLVED SOLIDS	7	484.000	732.000	673.714	1.447	0.000	0.000	0
1080 STRONTIUM	1	2000.000	2000.000	2000.001	0.000	0.000	0.000	0
945 SULFATE	7	280.000	380.000	344.537	1.077	288.740	398.045	0
10 TEMPERATURE(C)	7	0.500	21.000	6.214	7.516	6.214	17.589	0
1085 VANADIUM	1	3.300	3.300	3.300	0.000	0.000	0.000	0
1090 ZINC	1	-3.000	-3.000	3.000	0.000	0.000	0.000	1

Simple Statistics - USGS Streams -

Station: Box Elder Gulch near west line (C) 3 samplings

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
1106 ALUMINUM	1	20.000	20.000	20.000	0.000	0.000	0.000	0
1000 ARSENIC	1	10.000	10.000	10.000	0.000	0.000	0.000	0
1005 BARIUM	1	100.000	100.000	100.000	0.000	0.000	0.000	0
1010 BERYLLIUM	1	0.000	0.000	0.000	0.000	0.000	0.000	0
71870 BROMIDE	1	0.100	0.100	0.100	0.000	0.000	0.000	0
1025 CADMIUM	1	0.000	0.000	0.000	0.000	0.000	0.000	0
915 CALCIUM	3	53.000	91.000	68.279	1.312	10.131	460.182	0
940 CHLORIDE	3	5.500	6.600	5.949	1.098	3.081	11.488	0
1030 CHROMIUM	1	0.000	0.000	0.000	0.000	0.000	0.000	0
340 COD	1	150.000	150.000	150.000	0.000	0.000	0.000	0
95 SPECIFIC CONDUCTANCE	3	800.000	900.000	849.019	1.041	561.580	1783.579	0
1040 COPPER	1	2.000	2.000	2.000	0.000	0.000	0.000	0
720 CYANIDE-TOTAL	1	0.000	0.000	0.000	0.000	0.000	0.000	0
300 DISSOLVED OXYGEN	3	6.500	9.200	7.722	1.190	2.282	24.134	0
950 FLUORIDE	3	0.300	0.400	0.330	1.181	0.103	1.059	0
900 HARDNESS-TOTAL	3	310.000	430.000	366.728	1.178	116.201	1157.387	0
1046 IRON	1	10.000	10.000	10.000	0.000	0.000	0.000	0
1049 LEAD	1	0.000	0.000	0.000	0.000	0.000	0.000	0
1130 LITHIUM	1	4.000	4.000	4.000	0.000	0.000	0.000	0
925 MAGNESIUM	3	44.000	50.000	47.593	1.071	29.382	77.089	0
1056 MANGANESE	1	10.000	10.000	10.000	0.000	0.000	0.000	0
38260 MBAS	1	0.100	0.100	0.100	0.000	0.000	0.000	0
71890 MERCURY	1	0.100	0.100	0.100	0.000	0.000	0.000	0
1060 MOLYBDENUM	1	35.000	35.000	35.000	0.000	0.000	0.000	0
1065 NICKEL	1	0.000	0.000	0.000	0.000	0.000	0.000	0
681 ORGANIC CARBON-DISSOLVED	1	13.000	13.000	13.000	0.000	0.000	0.000	0
689 ORGANIC CARBON-SUSPENDED	1	43.000	43.000	43.000	0.000	0.000	0.000	0
400 PH	3	8.100	8.700	8.433	0.305	8.433	10.577	0
32730 PHENOLICS	1	1.000	1.000	1.000	0.000	0.000	0.000	0
935 POTASSIUM	3	0.800	1.000	0.896	1.118	0.409	1.962	0
1515 GROSS ALPHA-PC/L AS U-NATURAL	1	-8.200	-8.200	8.200	0.000	0.000	0.000	1
9511 RADIUM 226	1	0.100	0.100	0.100	0.000	0.000	0.000	0
80030 GROSS ALPHA-UG/L AS U-NAT	1	-12.000	-12.000	12.000	0.000	0.000	0.000	1
80050 GROSS BETA-PC/L AS SR90	1	-4.100	-4.100	4.100	0.000	0.000	0.000	1
3515 GROSS BETA-PC/L AS CS 137	1	-4.500	-4.500	4.500	0.000	0.000	0.000	1
1145 SELENIUM	1	4.000	4.000	4.000	0.000	0.000	0.000	0
955 SILICA	3	21.000	23.000	21.985	1.047	15.978	30.250	0
930 SODIUM	3	52.000	59.000	55.921	1.067	35.376	88.399	0
931 SODIUM ABSORPTION RATIO	3	1.200	1.400	1.263	1.093	0.676	2.359	0
70301 DISSOLVED SOLIDS	1	430.000	430.000	430.000	0.000	0.000	0.000	0
1080 STRONTIUM	1	1300.000	1300.000	1300.001	0.000	0.000	0.000	0
945 SULFATE	3	170.000	200.000	182.916	1.086	102.575	326.181	0
10 TEMPERATURE(C)	3	9.000	24.000	17.333	3.505	17.333	77.021	0
1085 VANADIUM	1	4.700	4.700	4.700	0.000	0.000	0.000	0
1090 ZINC	1	10.000	10.000	10.000	0.000	0.000	0.000	0

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Station: Corral Gulch east of tract (D) 8 samplings

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
410 ALKALINITY	2	410.000	450.000	429.535	1.068	6.50328	369.580	0
1106 ALUMINUM	1	0.000	0.000	0.000	0.000	0.000	0.000	0
71846 AMMONIA	2	0.080	0.360	0.170	2.897	0.000	0.000	0
1000 ARSENIC	1	7.000	7.000	7.000	0.000	0.000	0.000	0
1005 BARIUM	1	90.000	90.000	90.000	0.000	0.000	0.000	0
1010 BERYLLIUM	1	-1.000	-1.000	1.000	0.000	0.000	0.000	1
440 BICARBONATE	2	500.000	550.000	524.405	1.070	7.19138	242.344	0
310 BOD	1	2.400	2.400	2.400	0.000	0.000	0.000	0
1020 BORON	2	130.000	160.000	144.222	1.158	0.000	0.000	0
71870 BROMIDE	1	0.100	0.100	0.100	0.000	0.000	0.000	0
1025 CADMIUM	1	-1.000	-1.000	1.000	0.000	0.000	0.000	1
915 CALCIUM	8	40.000	82.000	59.708	1.266	43.726	81.532	0
445 CARBONATE	2	0.000	0.000	0.000	1.000	0.000	0.000	0
940 CHLORIDE	8	7.400	18.000	10.689	1.333	7.312	15.624	0
1030 CHROMIUM	1	0.000	0.000	0.000	0.000	0.000	0.000	0
340 COD	1	44.000	44.000	44.000	0.000	0.000	0.000	0
80 COLOR	1	5.000	5.000	5.000	0.000	0.000	0.000	0
95 SPECIFIC CONDUCTANCE	8	1060.000	1500.000	1377.953	1.118	1189.010	1596.921	0
1040 COPPER	1	0.000	0.000	0.000	0.000	0.000	0.000	0
720 CYANIDE-TOTAL	1	0.000	0.000	0.000	0.000	0.000	0.000	0
300 DISSOLVED OXYGEN	8	5.600	9.600	7.292	1.187	5.811	9.149	0
950 FLUORIDE	8	0.400	1.300	0.772	1.493	0.454	1.311	0
900 HARDNESS-TOTAL	8	400.000	530.000	446.320	1.117	385.659	516.524	0
1046 IRON	2	10.000	90.000	30.000	4.729	0.000	0.000	0
625 KJELDAHL NITROGEN	1	1.000	1.000	1.000	0.000	0.000	0.000	0
1049 LEAD	1	0.000	0.000	0.000	0.000	0.000	0.000	0
1130 LITHIUM	1	60.000	60.000	60.000	0.000	0.000	0.000	0
925 MAGNESIUM	8	56.000	79.000	71.196	1.127	60.782	83.395	0
1056 MANGANESE	1	30.000	30.000	30.000	0.000	0.000	0.000	0
71900 MBAS	1	0.000	0.000	0.000	0.000	0.000	0.000	0
71900 MERCURY	1	0.200	0.200	0.200	0.000	0.000	0.000	0
1060 MOLYBDENUM	1	40.000	40.000	40.000	0.000	0.000	0.000	0
1065 NICKEL	1	0.000	0.000	0.000	0.000	0.000	0.000	0
71851 NITRATE (NO3)	1	0.530	0.530	0.530	0.000	0.000	0.000	0
71856 NITRITE (NO2)	1	0.160	0.160	0.160	0.000	0.000	0.000	0
631 NITRITE + NITRATE	2	0.170	0.340	0.378	3.095	0.000	0.000	0
608 AMMONIA NITROGEN	2	0.060	0.280	0.130	2.972	0.000	0.000	0
607 ORGANIC NITROGEN	2	0.180	0.600	0.329	2.343	0.000	0.000	0
681 ORGANIC CARBON-DISSOLVED	2	4.400	8.200	6.007	1.553	0.000	0.000	0
689 ORGANIC CARBON-SUSPENDED	1	1.400	1.400	1.400	0.000	0.000	0.000	0
680 CARBON - TOTAL ORGANIC	1	18.000	18.000	18.000	0.000	0.000	0.000	0
400 PH	8	7.500	8.100	7.825	0.198	7.825	8.087	0
32730 PHENOLICS	1	5.000	5.000	5.000	0.000	0.000	0.000	0
660 ORTHO-PHOSPHATE	2	0.000	0.000	0.000	1.000	0.000	0.000	0
671 DISSOLVED ORTHOPHOSPHORUS	2	0.000	0.000	0.000	1.000	0.000	0.000	0
665 TOTAL PHOSPHORUS	2	0.200	0.340	0.261	1.455	0.000	0.000	0
937 POTASSIUM	8	0.500	1.300	0.961	1.439	0.500	1.346	0
1515 GROSS ALPHA PCI/L AS U NATURAL	1	-11.000	-11.000	11.000	0.000	0.000	0.000	1
9511 RADIUM 226	1	0.130	0.130	0.130	0.000	0.000	0.000	0
80030 GROSS ALPHA-UG/L AS U-NAT	1	-16.000	-16.000	16.000	0.000	0.000	0.000	1
80050 GROSS BETA-PC/L AS SR90	1	-5.400	-5.400	5.400	0.000	0.000	0.000	1
9015 GROSS BETA-PC/L AS CS 137	1	-5.900	-5.900	5.900	0.000	0.000	0.000	1
1145 SELENIUM	1	1.000	1.000	1.000	0.000	0.000	0.000	0
955 SILICA	7	22.000	27.000	23.646	1.085	20.891	26.763	0
930 SODIUM	8	85.000	190.000	147.397	1.316	102.557	211.843	0
931 SODIUM ADSORPTION RATIO	8	1.800	4.100	3.097	1.385	2.223	4.314	0

70301	DISSOLVED SOLIDS	2	862.000	941.000	910.155	1.080	4.841**********	0
1080	STRONTIUM	1	5000.000	5000.000	5000.003	0.000	0.000	0.000	0
945	SULFATE	7	240.000	400.000	338.817	1.138	241.188	439.519	0
10	TEMPERATURE(C)	8	5.500	20.500	11.438	5.331	11.438	18.554	0
1085	VANADIUM	1	1.700	1.700	1.700	0.000	0.000	0.000	0
1090	ZINC	1	-3.000	-3.000	3.000	0.000	0.000	0.000	1

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Simple Statistics - USGS Streams - 1979

Station: Yellow Creek near White River (E) 8 samplings

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
410 ALKALINITY	1	1530.000	1530.000	1530.000	0.000	0.000	0.000	0
310 BOD	1	2.100	2.100	2.100	0.000	0.000	0.000	0
1020 BORON	1	810.000	810.000	810.000	0.000	0.000	0.000	0
915 CALCIUM	7	12.000	44.000	24.482	1.557	13.554	51.742	0
940 CHLORIDE	7	63.000	220.000	127.170	1.503	68.310	236.745	0
95 SPECIFIC CONDUCTANCE	7	1800.000	5200.000	3755.659	1.412	2238.791	6378.527	0
300 DISSOLVED OXYGEN	7	6.500	12.200	9.628	1.252	6.848	13.536	0
950 FLUORIDE	7	1.400	2.900	2.311	1.331	1.499	3.561	0
900 HARDNESS-TOTAL	7	220.000	570.000	447.806	1.390	272.149	736.840	0
925 MAGNESIUM	7	31.000	120.000	89.223	1.602	43.731	182.037	0
681 ORGANIC CARBON-DISSOLVED	1	13.000	13.000	13.000	0.000	0.000	0.000	0
400 PH	7	8.000	8.800	8.543	0.264	8.543	8.742	0
935 POTASSIUM	7	3.300	8.400	5.087	1.395	3.073	8.419	0
955 SILICA	7	6.500	13.000	9.264	1.282	6.308	13.603	0
930 SODIUM	7	370.000	1700.000	799.438	1.475	443.752	1440.223	0
931 SODIUM ABSORPTION RATIO	7	11.000	22.000	16.533	1.300	11.110	24.603	0
70301 DISSOLVED SOLIDS	8	1530.000	7610.000	1926.319	1.316	280.565	13225.821	0
945 SULFATE	7	110.000	640.000	401.226	1.881	154.201	1043.977	0
10 TEMPERATURE(C)	7	0.000	29.500	10.071	13.110	10.071	29.912	0

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APPENDIX 5-1.4

U.S. Geological Survey Surface Gaging Stations
Water Quality Statistical Comparison of Baseline Data and Report Period

*** Statistical Tests - USGS Streams ***

Data Set 1: 1979 - Corral Gulch near west line
Data Set 2: Baseline - Corral Gulch near west line

Parameter		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
410 ALKALINITY	1:	1	320.000	0.000				
	2:	45	318.260	1.060				
1106 ALUMINUM	1:	1	0.000	0.000				
	2:	8	39.490	2.120				
71846 AMMONIA	1:	1	0.010	0.000				
	2:	20	0.020	2.470				
1000 ARSENIC	1:	1	4.000	0.000				
	2:	39	4.400	1.290				
1005 BARIUM	1:	1	60.000	0.000				
	2:	38	78.170	2.140				
1010 BERYLLIUM	1:	1	1.000	0.000				
	2:	6	-2.670	1.940				
440 BICARBONATE	1:	1	390.000	0.000				
	2:	45	387.570	1.060				
1020 BORON	1:	1	100.000	0.000				
	2:	43	96.100	1.180				
71870 BROMIDE	1:	1	0.100	0.000				
	2:	2	0.100	1.000				
1025 CADMIUM	1:	1	1.000	0.000				
	2:	41	3.640	2.840				
915 CALCIUM	1:	7	81.510	1.145	t...	1.409	2.009	A
	2:	46	87.760	1.080	F...	3.095	2.587	r
					t'..	2.429		A
445 CARBONATE	1:	1	0.000	0.000				
	2:	36	0.000	1.000				
940 CHLORIDE	1:	7	6.903	1.123	t...	2.010	2.009	r
	2:	46	7.610	1.150	F...	1.448	4.292	A
					t'..	2.377		A
1030 CHROMIUM	1:	1	0.000	0.000				
	2:	20	-2.270	2.890				
340 COD	1:	1	19.000	0.000				
	2:	5	13.220	1.800				
80 COLOR	1:	1	0.000	0.000				
	2:	20	5.650	1.990				
95 SPECIFIC CONDUCTANCE	1:	7	1051.642	1.081	t...	0.871	2.009	A
	2:	46	1079.710	1.050	F...	2.533	2.587	A
					t'..	2.425		A
1040 COPPER	1:	1	0.000	0.000				

	2:	39	2.600	2.590				
720 CYANIDE-TOTAL	1:	1	0.000	0.000				
	2:	16	-0.010	1.000				
300 DISSOLVED OXYGEN	1:	7	10.407	1.173	t...	2.603	2.018	r
	2:	38	8.740	1.200	F...	1.311	4.320	A
					t'..	2.373		r
950 FLUORIDE	1:	7	0.333	2.310	t...	0.889	2.009	A
	2:	46	0.250	1.520	F...	3.996	2.587	r
					t'..	2.433		A
900 HARDNESS-TOTAL	1:	7	437.900	1.113	t...	1.214	2.009	A
	2:	46	460.360	1.050	F...	4.836	2.587	r
					t'..	2.435		A
1046 IRON	1:	1	10.000	0.000				
	2:	46	43.240	2.740				
1049 LEAD	1:	1	0.000	0.000				
	2:	39	2.560	2.540				
1130 LITHIUM	1:	1	20.000	0.000				
	2:	39	12.260	1.810				
925 MAGNESIUM	1:	7	56.765	1.106	t...	0.814	2.009	A
	2:	46	58.580	1.050	F...	4.245	2.587	r
					t'..	2.434		A
1056 MANGANESE	1:	1	1.000	0.000				
	2:	44	11.570	1.920				
38260 MBAS	1:	1	0.000	0.000				
	2:	1	0.000	0.000				
71890 MERCURY	1:	1	0.000	0.000				
	2:	36	0.020	3.970				
1060 MOLYBDENUM	1:	1	39.000	0.000				
	2:	7	37.990	1.320				
1065 NICKEL	1:	1	0.000	0.000				
	2:	6	-7.630	1.720				
631 NITRITE + NITRATE	1:	1	1.000	0.000				
	2:	46	0.920	1.590				
608 AMMONIA NITROGEN	1:	1	0.010	0.000				
	2:	20	0.020	2.170				
607 ORGANIC NITROGEN	1:	1	0.300	0.000				
	2:	7	0.490	1.330				
1330 ODOR	1:	1	0.000	0.000				
	2:	42	0.000	4.430				
681 ORGANIC CARBON-DISSOLVED	1:	1	7.600	0.000				
	2:	8	9.520	1.500				
689 ORGANIC CARBON-SUSPENDED	1:	1	0.500	0.000				
	2:	6	0.670	3.470				
400 PH	1:	7	8.214	0.204	t...	1.439	2.012	A
	2:	44	8.090	0.260	F...	1.632	4.298	A
					t'..	2.367		A

32730 PHENOLICS	1:	1	9.000	0.000				
	2:	2	1.730	2.170				
660 ORTHO-PHOSPHATE	1:	1	0.000	0.000				
	2:	46	0.020	2.780				
671 DISSOLVED ORTHOPHOSPHORUS	1:	1	0.000	0.000				
	2:	46	0.010	1.710				
665 TOTAL PHOSPHORUS	1:	1	0.010	0.000				
	2:	20	0.040	3.850				
935 POTASSIUM	1:	7	1.133	1.253	t...	2.130	2.009	r
	2:	46	1.390	1.350	F...	1.771	4.292	A
					t'..	2.365		A
1515 GROSS ALPHA-PC/L AS U-NATURAL	1:	1	9.500	0.000				
	2:	4	-7.060	1.230				
80030 GROSS ALPHA-UG/L AS U-NAT	1:	1	14.000	0.000				
	2:	4	-10.380	1.230				
80050 GROSS BETA-PC/L AS SR90	1:	1	4.400	0.000				
	2:	4	6.460	2.630				
3515 GROSS BETA-PC/L AS CS 137	1:	1	5.000	0.000				
	2:	4	7.990	2.660				
1145 SELENIUM	1:	1	3.000	0.000				
	2:	37	3.770	1.230				
955 SILICA	1:	7	20.450	1.128	t...	0.761	2.009	A
	2:	46	18.780	2.000	F...	32.879	4.292	r
					t'..	2.096		A
930 SODIUM	1:	7	78.764	1.088	t...	2.063	2.009	r
	2:	46	84.860	1.120	F...	1.787	4.292	A
					t'..	2.364		A
931 SODIUM ABSORPTION RATIO	1:	7	1.640	1.061	t...	3.921	2.009	r
	2:	46	1.810	1.080	F...	1.689	4.292	A
					t'..	2.368		r
70301 DISSOLVED SOLIDS	1:	2	563.638	1.447	t...	1.039	2.016	A
	2:	45	739.520	1.030	F...	156.372	4.020	r
					t'..	12.704		A
1080 STRONTIUM	1:	1	2000.001	0.000				
	2:	8	1503.150	1.200				
945 SULFATE	1:	7	266.537	1.077	t...	2.043	2.009	r
	2:	46	282.920	1.060	F...	1.605	2.587	A
					t'..	2.414		A
10 TEMPERATURE(C)	1:	7	6.214	7.516	t...	2.768	2.005	r
	2:	50	14.590	7.380	F...	1.037	2.565	A
					t'..	2.401		r
1085 VANADIUM	1:	1	3.300	0.000				
	2:	6	-7.860	1.890				
1090 ZINC	1:	1	3.000	0.000				
	2:	39	15.140	2.580				

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*** Statistical Tests - USGS Streams ***

Data Set 1: 1979 - Box Elder Gulch near west line
Data Set 2: Baseline - Box Elder Gulch near west line

Parameter		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
1106 ALUMINUM	1:	1	20.000	0.000				
	2:	4	57.480	1.910				
1000 ARSENIC	1:	1	10.000	0.000				
	2:	8	6.010	1.740				
1005 BARIUM	1:	1	100.000	0.000				
	2:	10	74.760	1.570				
1010 BERYLLIUM	1:	1	0.000	0.000				
	2:	4	-2.510	2.070				
71870 BROMIDE	1:	1	0.100	0.000				
	2:	1	0.000	0.000				
1025 CADMIUM	1:	1	0.000	0.000				
	2:	10	4.270	3.060				
915 CALCIUM	1:	3	68.279	1.312	t...	0.171	2.160	A
	2:	12	66.350	1.220	F...	1.869	4.470	A
					t'..	4.117		A
940 CHLORIDE	1:	3	5.949	1.098	t...	1.125	2.160	A
	2:	12	5.570	1.080	F...	1.485	4.470	A
					t'..	4.074		A
1030 CHROMIUM	1:	1	0.000	0.000				
	2:	8	3.240	3.100				
340 COD	1:	1	150.000	0.000				
	2:	3	23.630	4.090				
95 SPECIFIC CONDUCTANCE	1:	3	849.019	1.061	t...	0.108	2.160	A
	2:	12	845.160	1.090	F...	2.141	14.340	A
					t'..	3.714		A
1040 COPPER	1:	1	2.000	0.000				
	2:	10	2.990	3.120				
720 CYANIDE-TOTAL	1:	1	0.000	0.000				
	2:	6	0.010	1.000				
300 DISSOLVED OXYGEN	1:	3	7.722	1.130	t...	0.128	2.201	A
	2:	10	7.830	1.140	F...	1.758	4.830	A
					t'..	4.074		A
950 FLUORIDE	1:	3	0.330	1.181	t...	0.004	2.160	A
	2:	12	0.330	1.580	F...	7.585	14.340	A
					t'..	3.085		A
900 HARDNESS-TOTAL	1:	3	366.728	1.178	t...	0.906	2.160	A
	2:	12	313.200	1.440	F...	9.578	14.340	A
					t'..	2.968		A
1046 IRON	1:	1	10.000	0.000				

1049 LEAD	1:	1	0.000	0.000				
	2:	10	3.250	2.670				
1130 LITHIUM	1:	1	4.000	0.000				
	2:	10	14.520	2.120				
925 MAGNESIUM	1:	3	47.593	1.071	t...	1.009	2.160	A
	2:	12	39.430	1.880	F...	84.383	14.340	r
					t'..	2.330		A
1056 MANGANESE	1:	1	10.000	0.000				
	2:	12	9.860	1.840				
38260 MBAS	1:	1	0.100	0.000				
	2:	0	0.000	0.000				
71890 MERCURY	1:	1	0.100	0.000				
	2:	8	0.010	2.880				
1060 MOLYBDENUM	1:	1	35.000	0.000				
	2:	4	19.580	3.500				
1065 NICKEL	1:	1	0.000	0.000				
	2:	4	-4.950	1.670				
681 ORGANIC CARBON-DISSOLVED	1:	1	13.000	0.000				
	2:	4	9.670	2.450				
689 ORGANIC CARBON--SUSPENDED	1:	1	43.000	0.000				
	2:	2	1.300	2.390				
400 PH	1:	3	8.433	0.305	t...	2.025	2.179	A
	2:	11	8.040	0.270	F...	1.280	4.630	A
					t'..	4.023		A
32730 PHENOLICS	1:	1	1.000	0.000				
	2:	1	0.000	0.000				
935 POTASSIUM	1:	3	0.896	1.118	t...	1.350	2.160	A
	2:	12	1.210	2.090	F...	43.609	14.340	r
					t'..	2.436		A
1515 GROSS ALPHA-PC/L AS U-NATURAL	1:	1	8.200	0.000				
	2:	2	3.420	3.020				
9511 RADIUM 226	1:	1	0.100	0.000				
	2:	0	0.000	0.000				
80030 GROSS ALPHA-UG/L AS U-NAT	1:	1	12.000	0.000				
	2:	2	5.030	3.020				
80050 GROSS BETA-PC/L AS SR90	1:	1	4.100	0.000				
	2:	2	7.900	2.020				
3515 GROSS BETA-PC/L AS CS 137	1:	1	4.500	0.000				
	2:	2	9.630	2.050				
1145 SELENIUM	1:	1	4.000	0.000				
	2:	9	3.540	1.690				
955 SILICA	1:	3	21.985	1.047	t...	0.794	2.160	A
	2:	12	19.280	1.760	F...	154.534	14.340	r
					t'..	2.273		A

930	SODIUM	1:	3	55.921	1.067	t...	1.014	2.160	A
		2:	12	42.900	2.450	F...	188.607	14.340	r
						t'..	2.261		A
931	SODIUM ABSORPTION RATIO	1:	3	1.263	1.093	t...	0.910	2.160	A
		2:	12	1.030	2.130	F...	72.180	14.340	r
						t'..	2.350		A
70301	DISSOLVED SOLIDS	1:	1	430.000	0.000				
		2:	12	468.270	1.680				
1080	STRONTIUM	1:	1	1300.001	0.000				
		2:	4	599.070	2.110				
945	SULFATE	1:	3	182.916	1.086	t...	1.285	2.160	A
		2:	12	125.570	2.720	F...	147.394	14.340	r
						t'..	2.277		A
10	TEMPERATURE(C)	1:	3	17.333	8.505	t...	0.629	2.145	A
		2:	13	13.970	7.670	F...	1.230	4.350	A
						t'..	4.049		A
1085	VANADIUM	1:	1	4.700	0.000				
		2:	4	-5.480	1.640				
1090	ZINC	1:	1	10.000	0.000				
		2:	10	14.850	2.000				

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*** Statistical Tests - USGS Streams ***

Data Set 1: 1979 - Corral Gulch east of tract
Data Set 2: Baseline - Corral Gulch east of tract

Parameter		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
410 ALKALINITY	1:	2	429.535	1.068	t...	1.294	2.002	A
	2:	58	403.860	1.080	F...	1.367	39.479	A
					t'..	12.455		A
1106 ALUMINUM	1:	1	0.000	0.000				
	2:	11	24.280	2.120				
71846 AMMONIA	1:	2	0.170	2.897	t...	2.223	2.042	r
	2:	30	0.030	3.070	F...	1.112	39.460	A
					t'..	12.312		A
1000 ARSENIC	1:	1	7.000	0.000				
	2:	50	5.330	1.290				
1005 BARIUM	1:	1	90.000	0.000				
	2:	45	-74.090	1.810				
1010 BERYLLIUM	1:	1	1.000	0.000				
	2:	7	-3.320	1.670				
440 BICARBONATE	1:	2	524.405	1.070	t...	1.310	2.002	A
	2:	58	492.000	1.080	F...	1.304	39.479	A
					t'..	12.467		A
310 BOD	1:	1	2.400	0.000				
	2:	3	2.250	1.140				
1020 BORON	1:	2	144.222	1.158	t...	1.966	2.007	A
	2:	53	116.780	1.220	F...	1.834	39.476	A
					t'..	12.342		A
71870 BROMIDE	1:	1	0.100	0.000				
	2:	3	0.100	1.000				
1025 CADMIUM	1:	1	1.000	0.000				
	2:	48	3.390	3.330				
915 CALCIUM	1:	8	59.708	1.266	t...	4.295	1.999	r
	2:	58	85.560	1.070	F...	12.122	2.422	r
					t'..	2.361		r
445 CARBONATE	1:	2	0.000	1.000				
	2:	49	0.000	1.000				
940 CHLORIDE	1:	8	10.689	1.333	t...	0.856	1.999	A
	2:	58	9.780	1.180	F...	3.008	2.422	r
					t'..	2.351		A
1030 CHROMIUM	1:	1	0.000	0.000				
	2:	27	2.790	3.510				
340 COD	1:	1	44.000	0.000				
	2:	8	13.610	2.600				
80 COLOR	1:	1	5.000	0.000				

		2:	31	4.510	2.220			
95	SPECIFIC CONDUCTANCE	1:	8	1377.953	1.118	t...	2.781	1.998 r
		2:	59	1231.540	1.070	F...	2.717	2.416 r
						t'..	2.350	r
1040	COPPER	1:	1	0.000	0.000			
		2:	46	2.150	3.020			
720	CYANIDE-TOTAL	1:	1	0.000	0.000			
		2:	25	0.010	1.210			
300	DISSOLVED OXYGEN	1:	8	7.292	1.187	t...	1.941	2.001 A
		2:	53	8.320	1.250	F...	1.691	3.801 A
						t'..	2.299	A
950	FLUORIDE	1:	8	0.772	1.493	t...	2.687	1.999 r
		2:	58	0.490	2.020	F...	3.082	3.786 A
						t'..	2.266	r
900	HARDNESS-TOTAL	1:	8	446.320	1.117	t...	1.599	1.999 A
		2:	58	476.060	1.080	F...	2.060	2.422 A
						t'..	2.345	A
1046	IRON	1:	2	30.000	4.729	t...	0.037	2.005 A
		2:	55	31.250	2.350	F...	3.307	3.960 A
						t'..	12.646	A
625	KJELDAHL NITROGEN	1:	1	1.000	0.000			
		2:	21	0.420	2.090			
1049	LEAD	1:	1	0.000	0.000			
		2:	46	1.900	2.090			
1130	LITHIUM	1:	1	60.000	0.000			
		2:	46	11.590	2.350			
925	MAGNESIUM	1:	8	71.196	1.127	t...	3.122	1.999 r
		2:	58	62.040	1.100	F...	1.574	2.422 A
						t'..	2.339	r
1056	MANGANESE	1:	1	30.000	0.000			
		2:	52	16.830	1.990			
38260	MBAS	1:	1	0.000	0.000			
		2:	2	0.550	11.080			
71890	MERCURY	1:	1	0.200	0.000			
		2:	46	0.020	3.500			
1060	MOLYBDENUM	1:	1	40.000	0.000			
		2:	8	37.550	1.400			
1065	NICKEL	1:	1	0.000	0.000			
		2:	7	-8.590	1.920			
71851	NITRATE (NO3)	1:	1	0.530	0.000			
		2:	20	1.220	1.140			
71856	NITRITE (NO2)	1:	1	0.160	0.000			
		2:	21	0.020	2.860			
631	NITRITE + NITRATE	1:	2	0.378	3.025	t...	0.208	2.002 A
		2:	58	0.320	1.590	F...	5.934	3.942 r
						t'..	12.674	A

					t...	12.408		A
607	ORGANIC NITROGEN	1:	2	0.329	2.343	t...	0.194	2.262	A
		2:	9	0.290	1.990	F...	1.531	5.710	A
						t'..	11.921		A
681	ORGANIC CARBON-DISSOLVED	1:	2	6.007	1.553	t...	0.846	2.228	A
		2:	10	8.120	1.730	F...	1.550	39.400	A
						t'..	11.171		A
689	ORGANIC CARBON-SUSPENDED	1:	1	1.400	0.000				
		2:	10	0.360	1.400				
680	CARBON - TOTAL ORGANIC	1:	1	18.000	0.000				
		2:	3	11.370	1.270				
400	PH	1:	8	7.825	0.198	t...	0.679	1.999	A
		2:	58	7.880	0.310	F...	2.446	3.786	A
						t'..	2.281		A
32730	PHENOLICS	1:	1	5.000	0.000				
		2:	2	0.050	287.500				
660	ORTHO-PHOSPHATE	1:	2	0.000	1.000	t...	112.215	2.002	r
		2:	58	0.060	2.110	F...	0.000	3.786	r
						t'..	2.003		r
671	DISSOLVED ORTHOPHOSPHORUS	1:	2	0.000	1.000	t...	104.362	2.002	r
		2:	58	0.020	2.060	F...	0.000	3.786	r
						t'..	2.003		r
665	TOTAL PHOSPHORUS	1:	2	0.261	1.455	t...	7.359	2.040	r
		2:	31	0.030	2.020	F...	3.511	39.461	A
						t'..	11.589		A
935	POTASSIUM	1:	8	0.961	1.639	t...	2.853	1.999	r
		2:	58	1.590	1.220	F...	6.171	2.422	r
						t'..	2.358		r
1515	GROSS ALPHA-PC/L AS U-NATURAL	1:	1	11.000	0.000				
		2:	7	-6.600	1.290				
9511	RADIUM 226	1:	1	0.130	0.000				
		2:	4	0.070	1.340				
80030	GROSS ALPHA-UG/L AS U-NAT	1:	1	16.000	0.000				
		2:	7	-9.700	1.290				
80050	GROSS BETA-PC/L AS SR90	1:	1	5.400	0.000				
		2:	7	3.100	1.590				
3515	GROSS BETA-PC/L AS CS 137	1:	1	5.900	0.000				
		2:	7	3.830	1.610				
1145	SELENIUM	1:	1	1.000	0.000				
		2:	45	2.960	1.390				
955	SILICA	1:	7	23.646	1.085	t...	3.539	1.999	r
		2:	58	21.100	1.070	F...	1.463	2.521	A
						t ..	2.417		r
930	SODIUM	1:	8	147.397	1.316	t...	3.073	1.999	r
		2:	58	109.150	1.100	F...	8.280	2.422	r
						t'..	2.360		r

931	SODIUM ABSORPTION RATIO	1:	8	3.097	1.285	t...	4.076	1.999	r
		2:	58	2.150	1.100	F...	6.920	2.422	r
						t'..	2.359		r
70301	DISSOLVED SOLIDS	1:	2	910.155	1.080	t...	1.832	2.003	A
		2:	57	822.870	1.070	F...	1.238	3.948	A
						t'..	12.560		A
1080	STRONTIUM	1:	1	5000.003	0.000				
		2:	11	1685.550	1.150				
945	SULFATE	1:	7	338.817	1.188	t...	2.415	1.999	r
		2:	58	288.770	1.100	F...	3.255	2.521	r
						t'..	2.433		A
10	TEMPERATURE(C)	1:	8	11.438	5.381	t...	0.016	1.996	A
		2:	65	11.470	4.120	F...	1.706	2.401	A
						t'..	2.343		A
1085	VANADIUM	1:	1	1.700	0.000				
		2:	7	6.330	1.970				
1090	ZINC	1:	1	3.000	0.000				
		2:	46	12.470	2.050				

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*** Statistical Tests - USGS Streams ***

Data Set 1: 1979 - Yellow Creek near White River
Data Set 2: Baseline - Yellow Creek near White River

	Parameter		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
410	ALKALINITY	1:	1	1530.000	0.000				
		2:	43	1443.100	1.120				
310	BOD	1:	1	2.100	0.000				
		2:	4	1.930	2.200				
1020	BORON	1:	1	810.000	0.000				
		2:	43	691.870	1.150				
915	CALCIUM	1:	7	26.482	1.557	t...	1.044	2.010	A
		2:	45	31.810	1.430	F...	1.531	2.592	A
						t'..	2.412		A
940	CHLORIDE	1:	7	127.170	1.508	t...	0.064	2.010	A
		2:	45	125.910	1.150	F...	8.633	2.592	r
						t'..	2.440		A
95	SPECIFIC CONDUCTANCE	1:	7	3755.659	1.412	t...	0.136	2.010	A
		2:	45	3689.720	1.070	F...	25.970	2.592	r
						t'..	2.445		A
300	DISSOLVED OXYGEN	1:	7	9.628	1.252	t...	0.042	2.015	A
		2:	41	9.590	1.270	F...	1.127	4.307	A
						t'..	2.385		A
950	FLUORIDE	1:	7	2.311	1.331	t...	0.201	2.012	A
		2:	44	2.260	1.170	F...	3.315	2.598	r
						t'..	2.430		A
900	HARDNESS-TOTAL	1:	7	447.806	1.390	t...	1.345	2.010	A
		2:	45	530.160	1.120	F...	8.431	2.592	r
						t'..	2.440		A
925	MAGNESIUM	1:	7	89.223	1.602	t...	1.077	2.010	A
		2:	45	108.240	1.160	F...	10.078	2.592	r
						t'..	2.441		A
681	ORGANIC CARBON-DISSOLVED	1:	1	13.000	0.000				
		2:	12	8.970	1.680				
400	PH	1:	7	8.543	0.264	t...	0.069	2.012	A
		2:	44	8.550	0.200	F...	1.738	2.598	A
						t'..	2.415		A
935	POTASSIUM	1:	7	5.087	1.395	t...	1.609	2.010	A
		2:	45	4.140	1.170	F...	4.496	2.592	r
						t'..	2.434		A
955	SILICA	1:	7	9.264	1.289	t...	0.892	2.010	A
		2:	45	10.340	1.680	F...	4.176	4.295	A
						t'..	2.291		A
930	SODIUM	1:	7	799.438	1.475	t...	0.181	2.010	A
		2:	45	778.280	1.120	F...	11.780	2.592	r
				D		t'..	2.442		A

931 SODIUM ABSORPTION RATIO	1:	7	16.533	1.300	t...	1.273	2.010	A
	2:	45	14.530	1.150	F...	3.532	2.592	r
					t'..	2.431		A
70301 DISSOLVED SOLIDS	1:	3	1926.319	1.316	t...	1.672	2.017	A
	2:	43	2512.670	1.080	F...	12.723	3.442	r
					t'..	4.294		A
945 SULFATE	1:	7	401.226	1.881	t...	1.364	2.010	A
	2:	45	556.140	1.110	F...	36.660	2.592	r
					t'..	2.445		A
10 TEMPERATURE(C)	1:	7	10.071	13.110	t...	0.425	2.010	A
	2:	45	12.290	11.020	F...	1.415	2.592	A
					t'..	2.409		A

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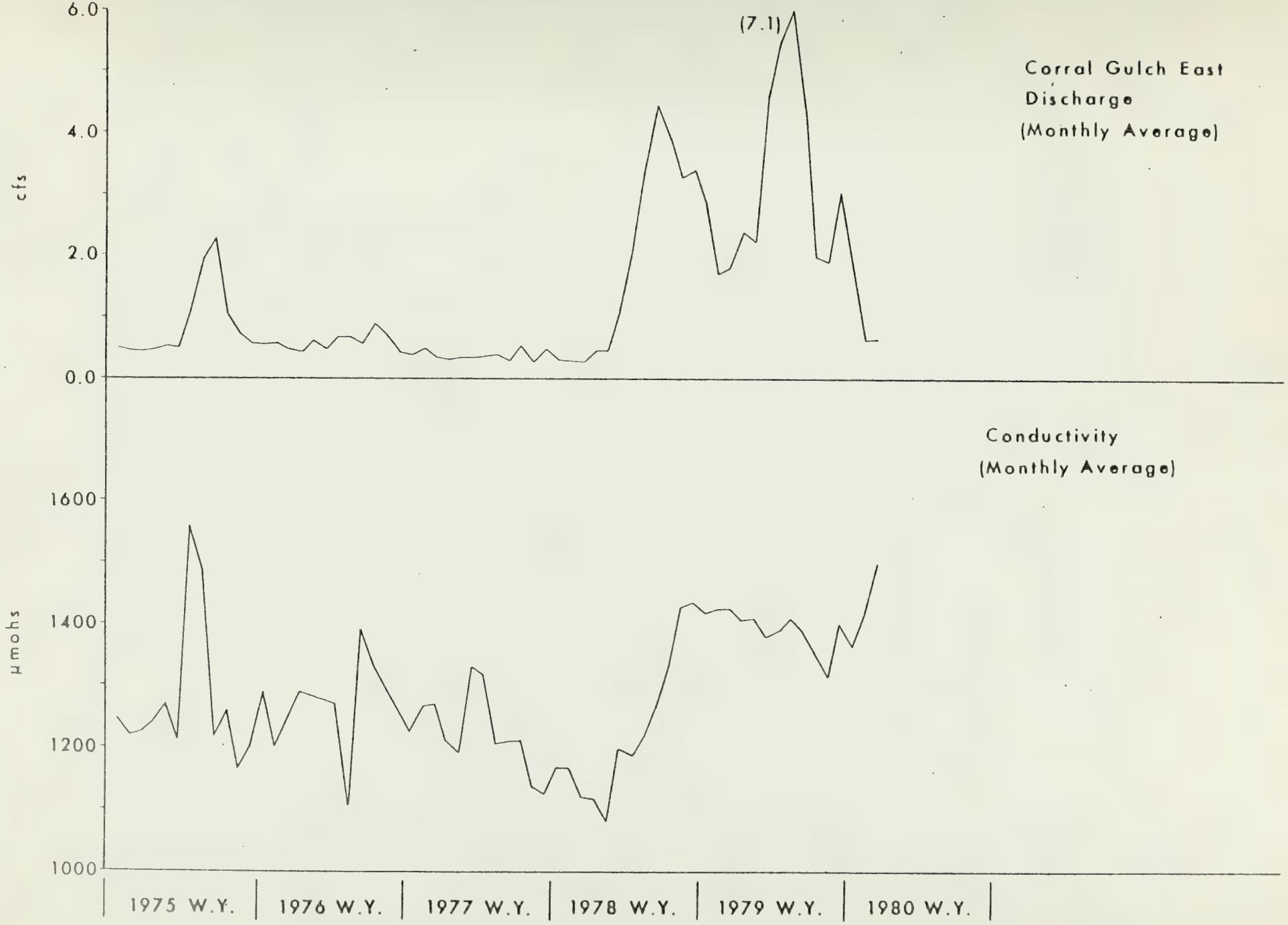
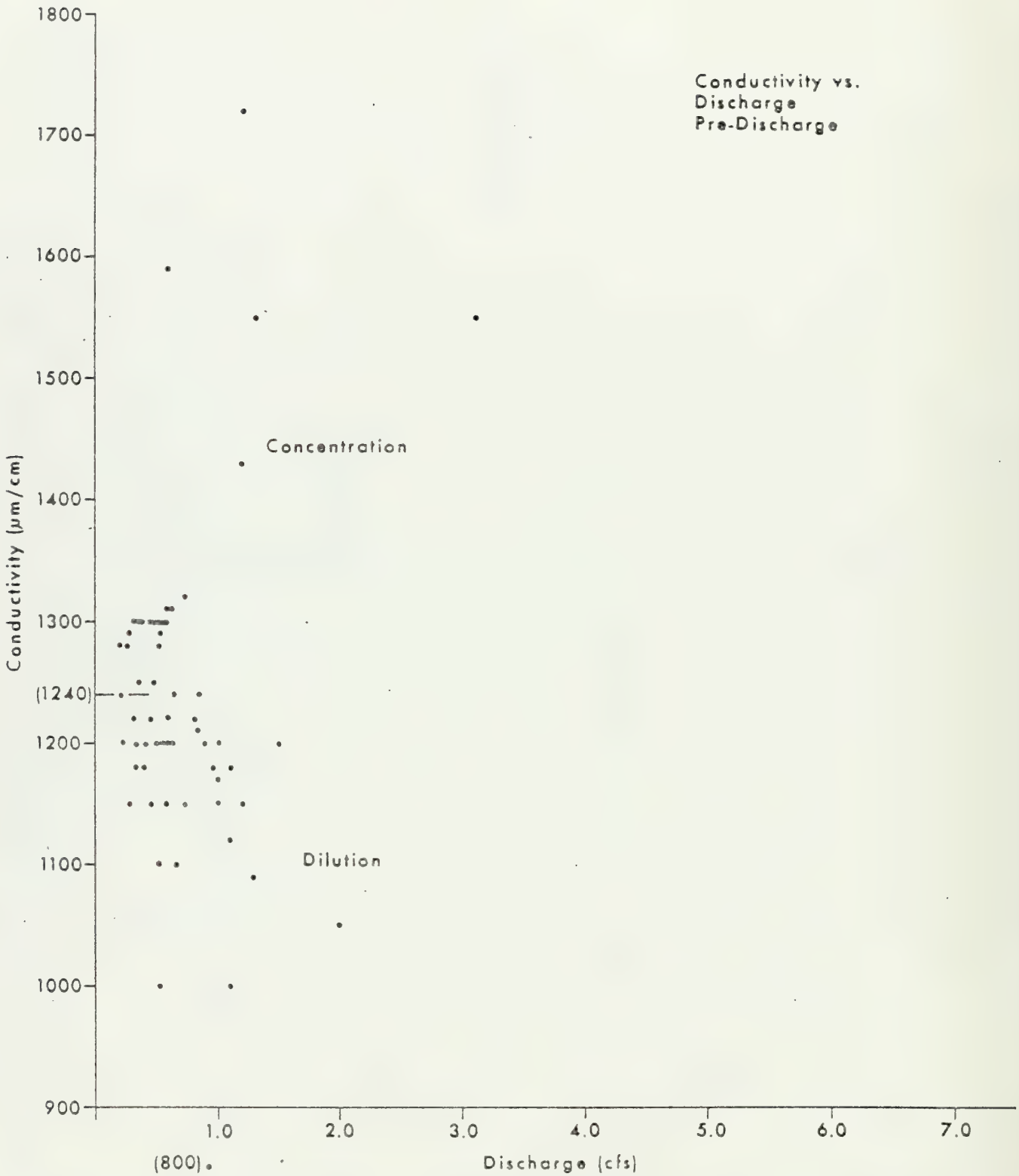
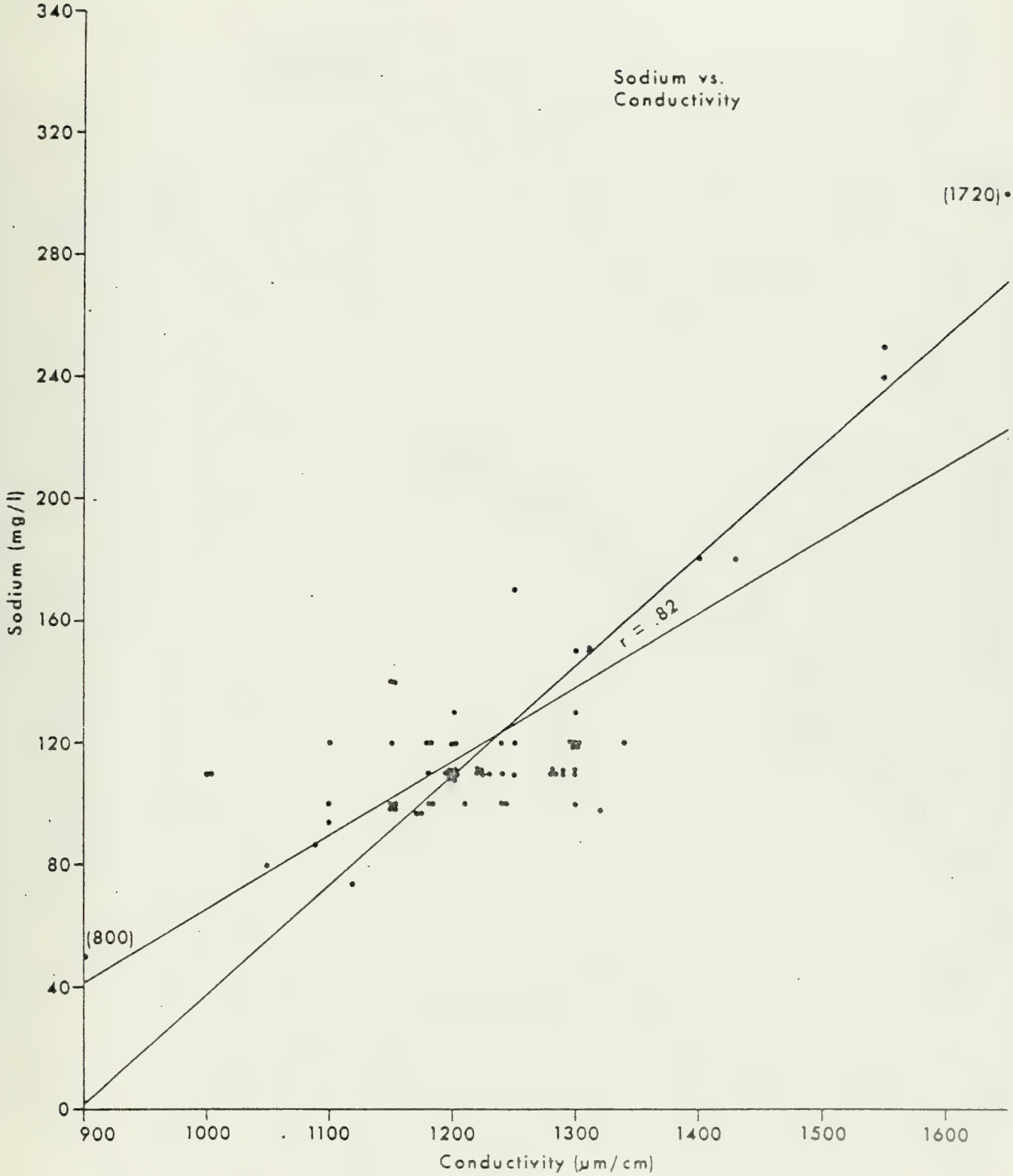
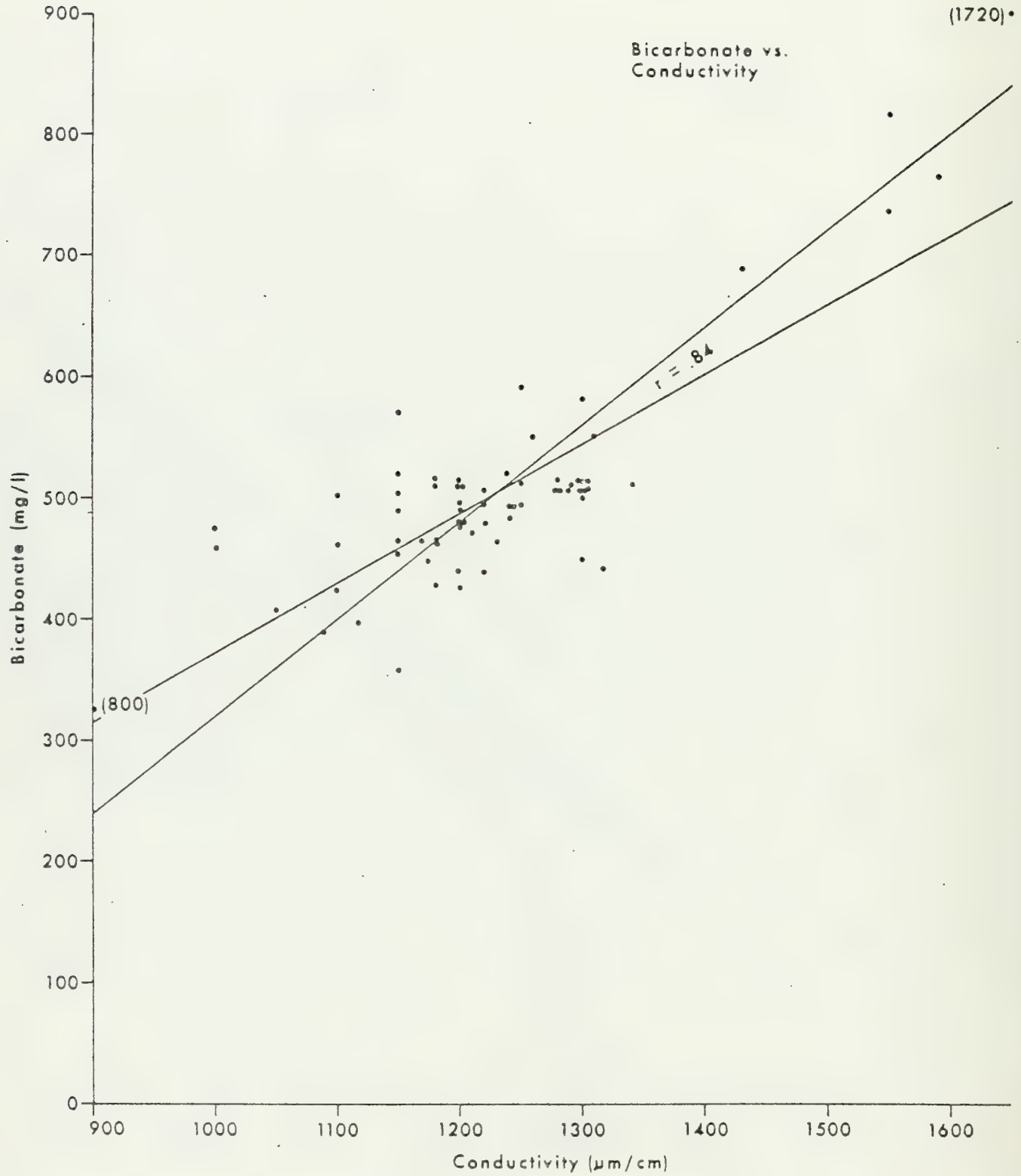
APPENDIX 5-1.5

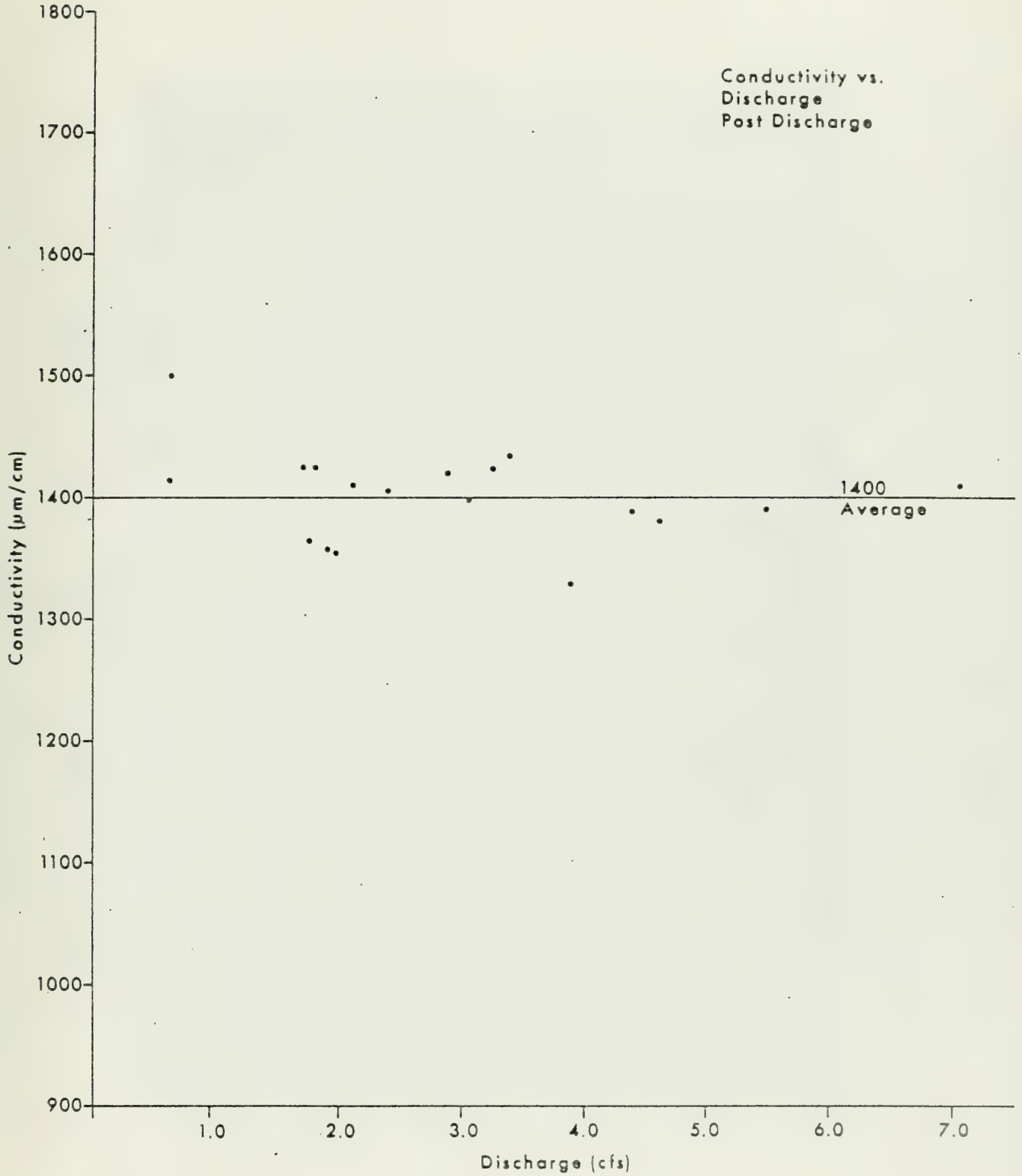
Special Analysis of Corral Gulch near East Line of Tract C-a


6.0
4.0
2.0
0.0
cfs
(7.1)
Corral Gulch East
Discharge
(Monthly Average)
Conductivity
(Monthly Average)
1600
1400
1200
1000
µmohs
1975 W.Y.
1976 W.Y.
1977 W.Y.
1978 W.Y.
1979 W.Y.
1980 W.Y.


Conductivity vs.
Discharge
Pre-Discharge
Concentration
Dilution
Conductivity (µm/cm)
1800
1700
1600
1500
1400
1300
(1240)
1200
1100
1000
900
(800)
1.0
2.0
3.0
4.0
5.0
6.0
7.0
Discharge (cfs)

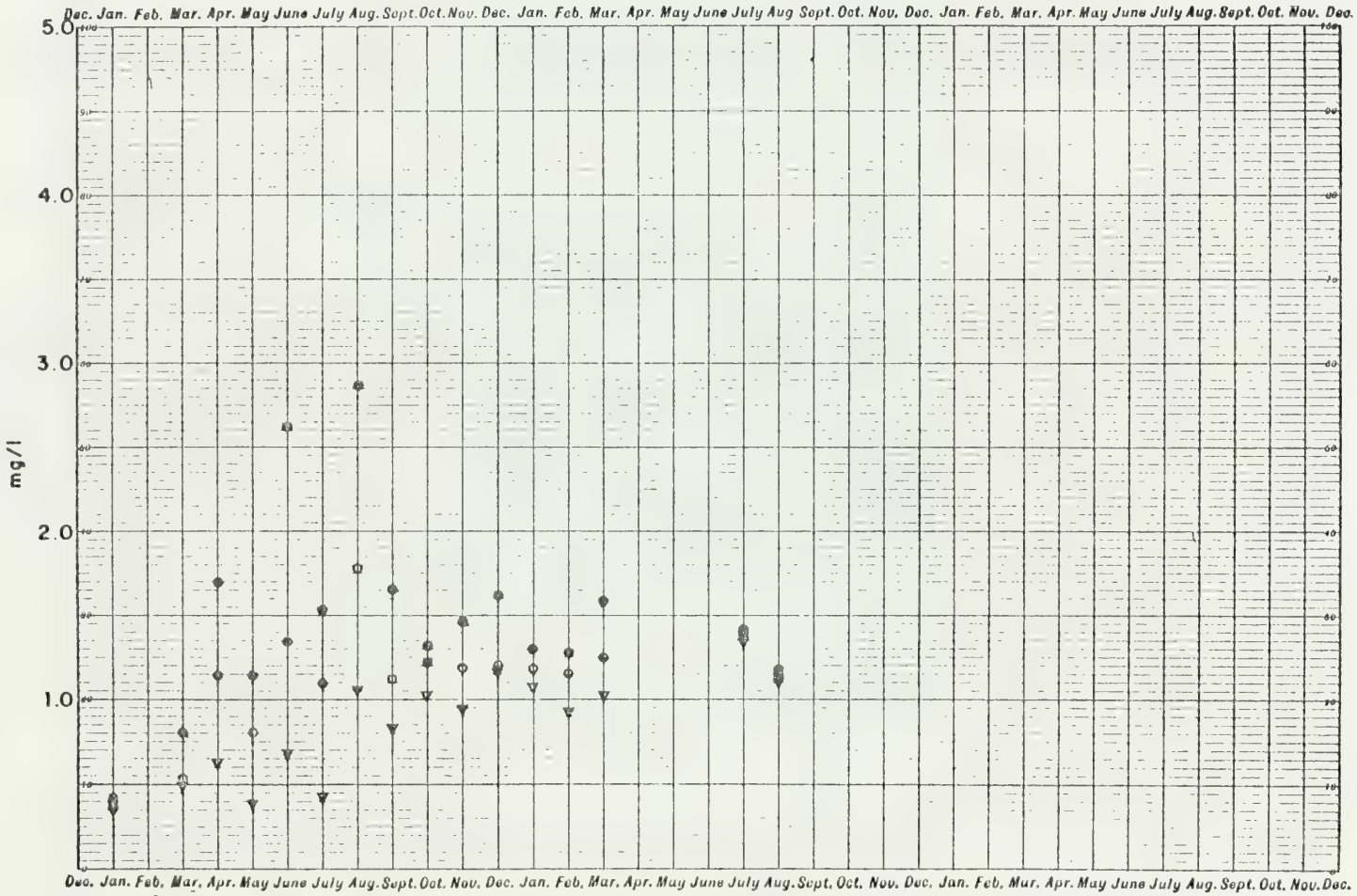

Sodium vs.
Conductivity
(1720)
(800)
r = .82
Sodium (mg/l)
Conductivity (µm/cm)
340
320
280
240
200
160
120
80
40
0
900
1000
1100
1200
1300
1400
1500
1600


Bicarbonate vs.
Conductivity
(1720)
r = .84
(800)
Bicarbonate (mg/l)
Conductivity (µm/cm)
900
800
700
600
500
400
300
200
100
0
900
1000
1100
1200
1300
1400
1500
1600


Conductivity vs.
Discharge
Post Discharge
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
1400
Average
Conductivity (µm/cm)
1.0
2.0
3.0
4.0
5.0
6.0
7.0
Discharge (cfs)

DISCHARGE POINT 001 FLUME F

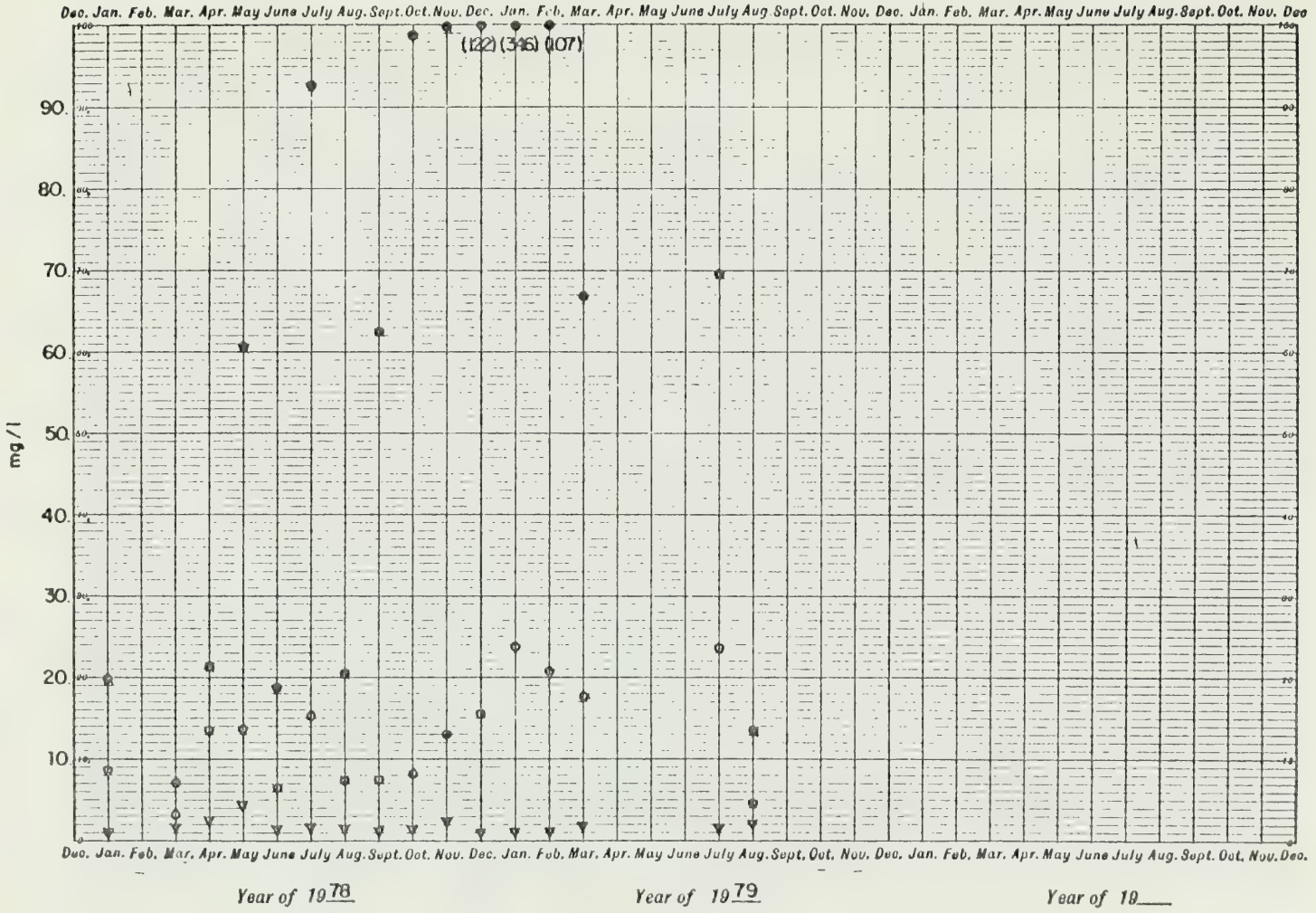
● - maximum
● - mean
▽ - minimum



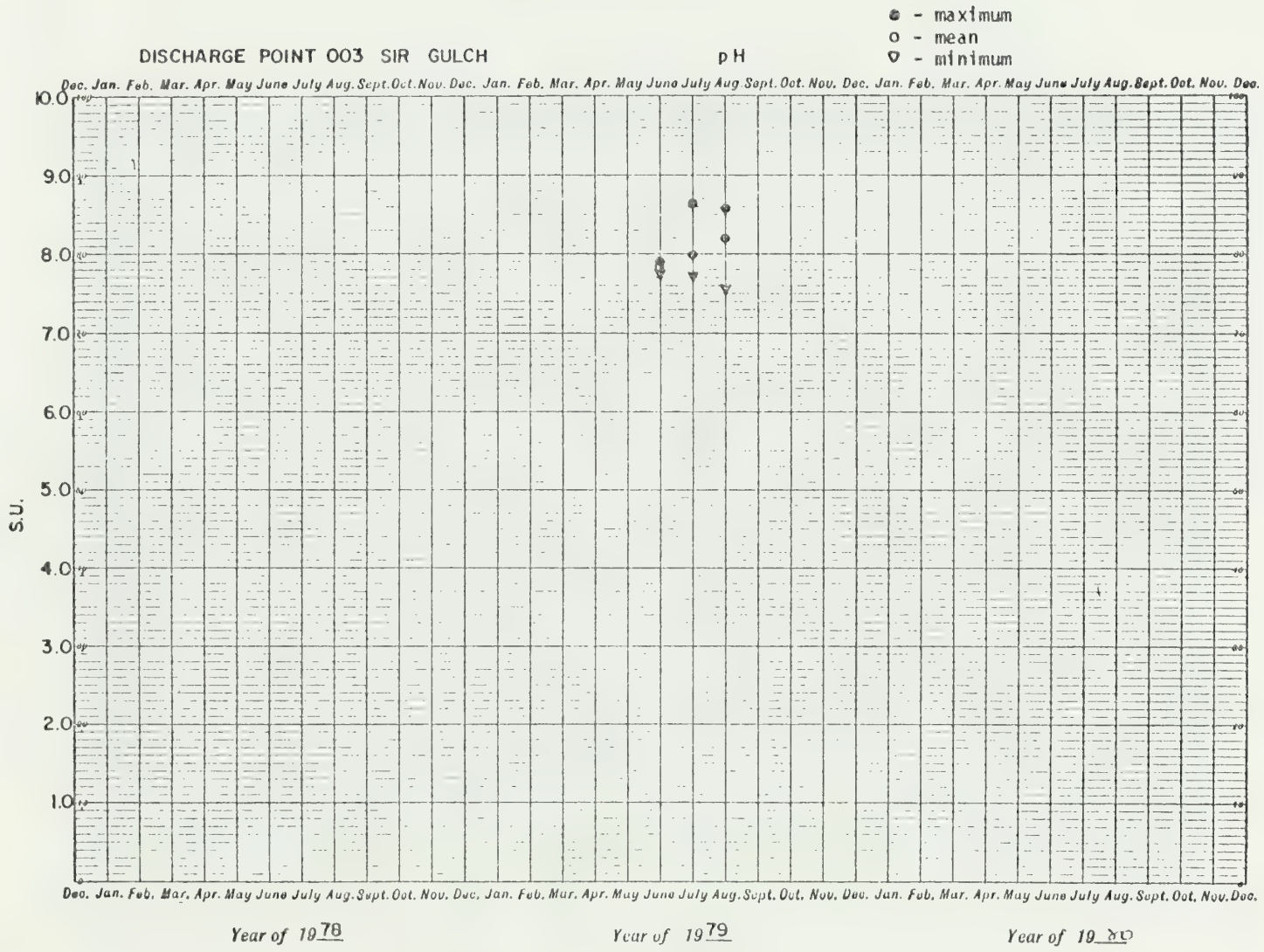
Year of 1978 Year of 1979 Year of 19XO

DISCHARGE POINT 001 FLUME TSS

● - maximum
o - mean
▽ - minimum



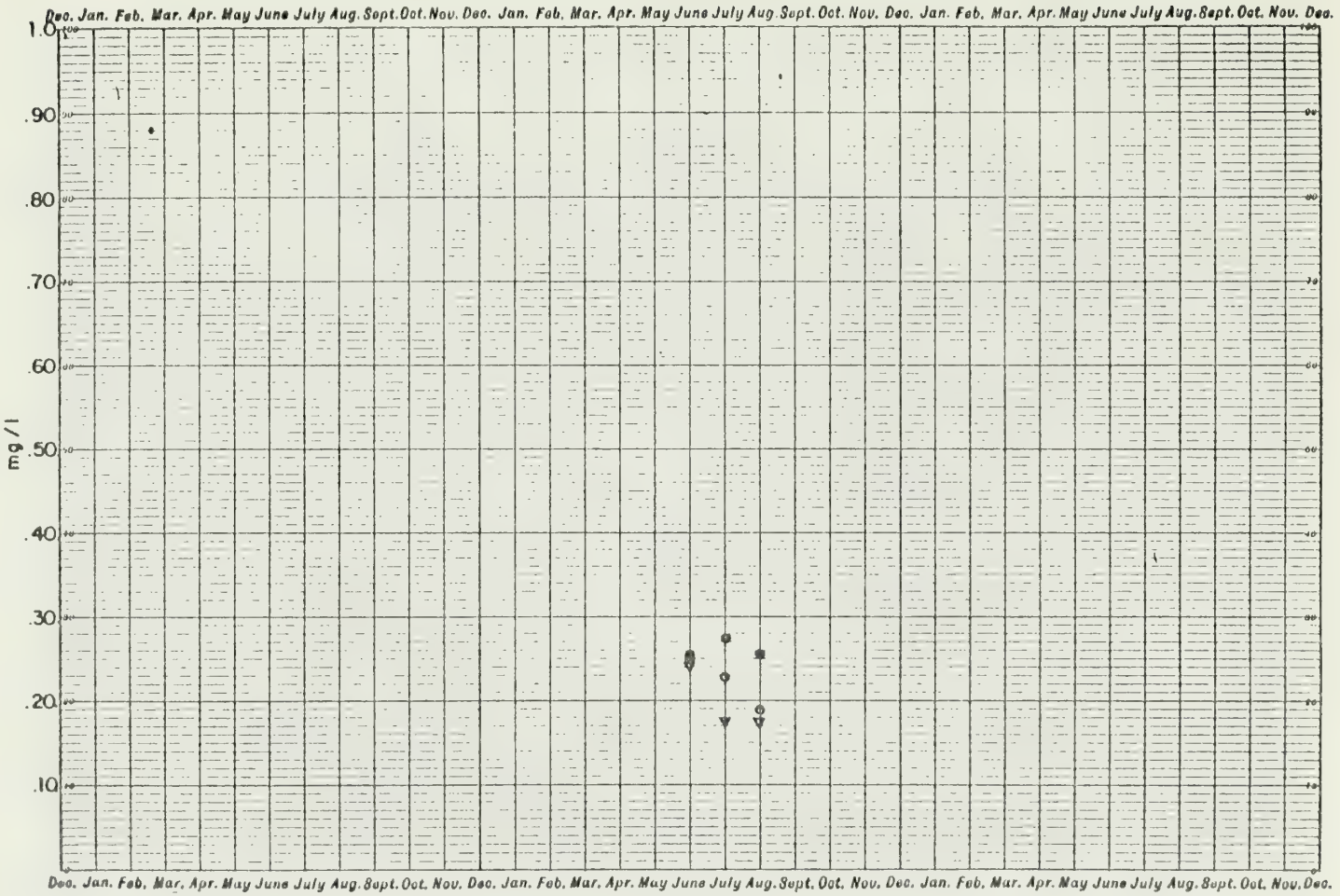
Year of 19 78 Year of 19 79 Year of 19___


DISCHARGE POINT 003 SIR GULCH
pH
● - maximum
o - mean
▽ - minimum
S.U.
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1978
Year of 1979
Year of 19 80

DISCHARGE POINT 003 SIR GULCH

B

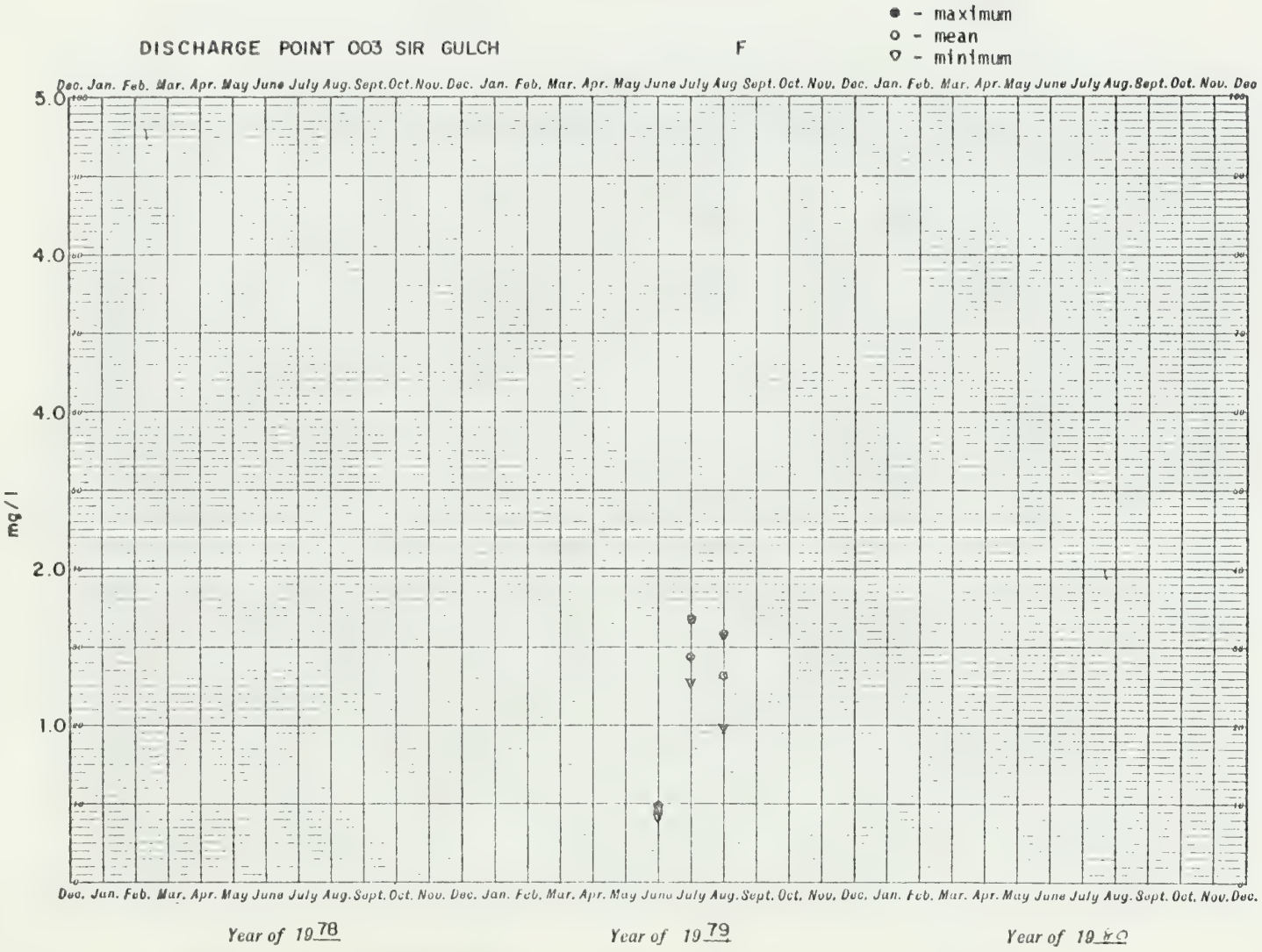
● - maximum
○ - mean
▽ - minimum



Year of 1978

Year of 1979

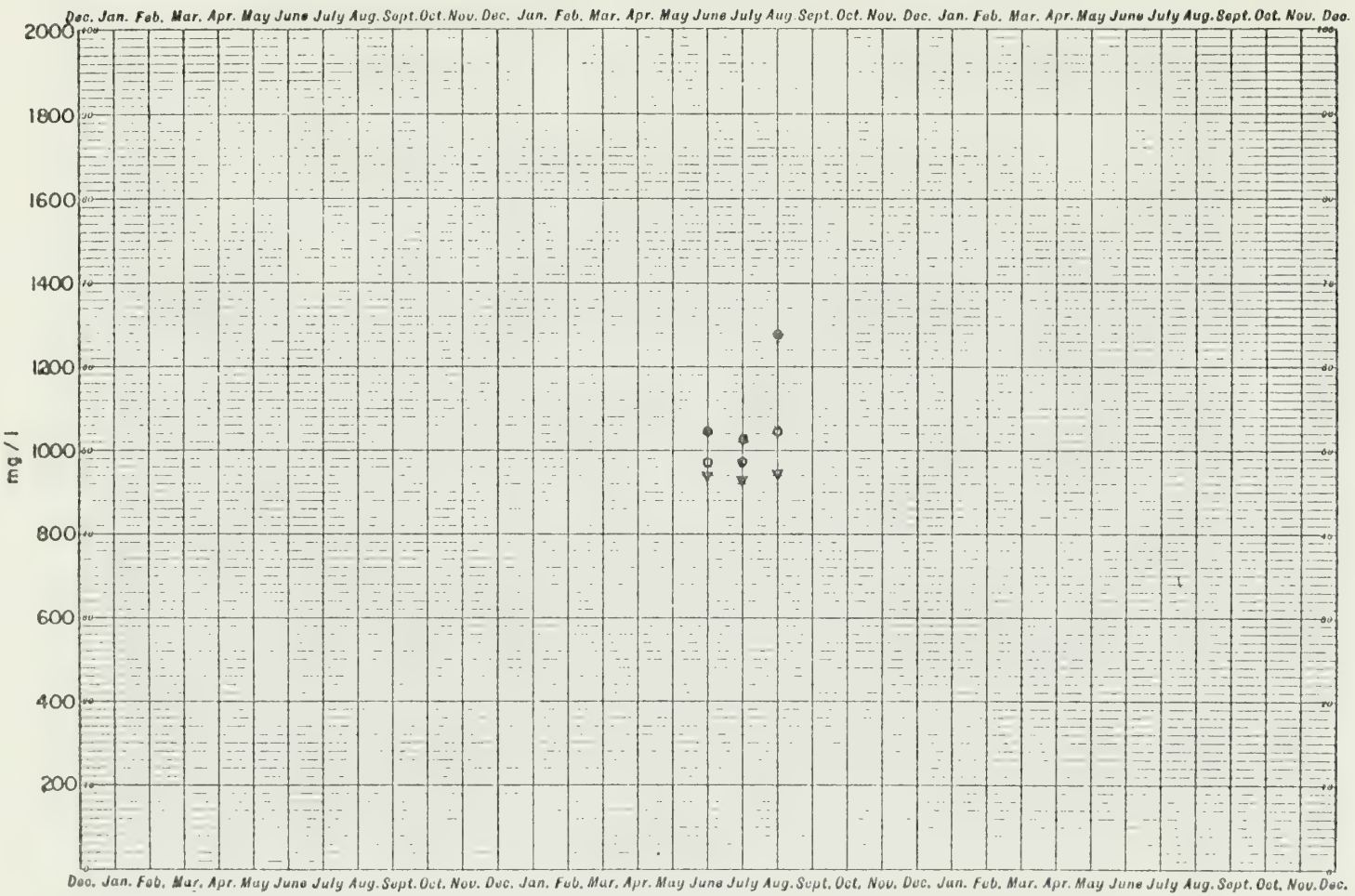
Year of 1980


DISCHARGE POINT 003 SIR GULCH
F
● - maximum
o - mean
▽ - minimum
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec
5.0
4.0
4.0
2.0
1.0
mg/l
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 19 78
Year of 19 79
Year of 19 80

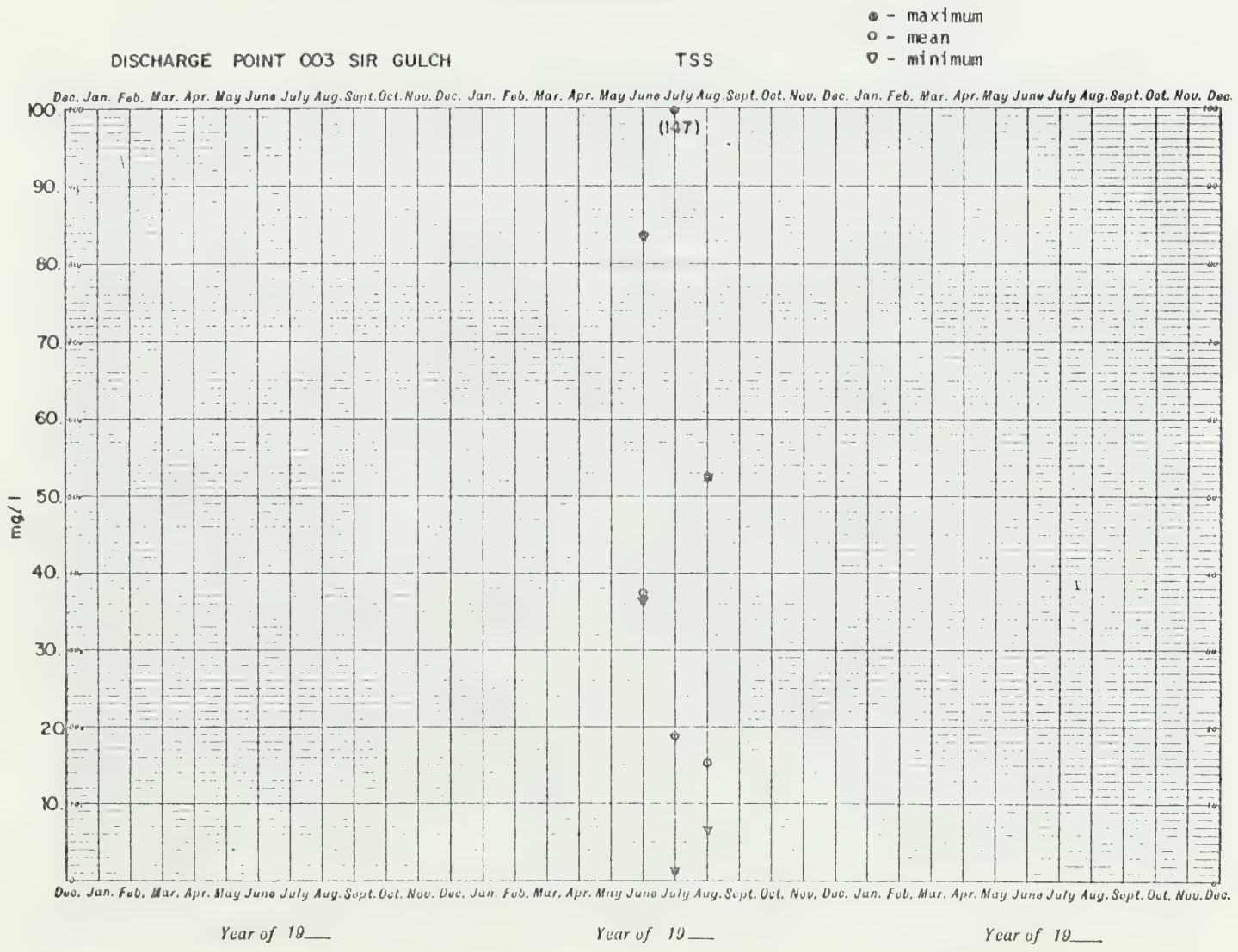
DISCHARGE POINT 003 SIR GULCH

TDS

● - maximum
○ - mean
▽ - minimum



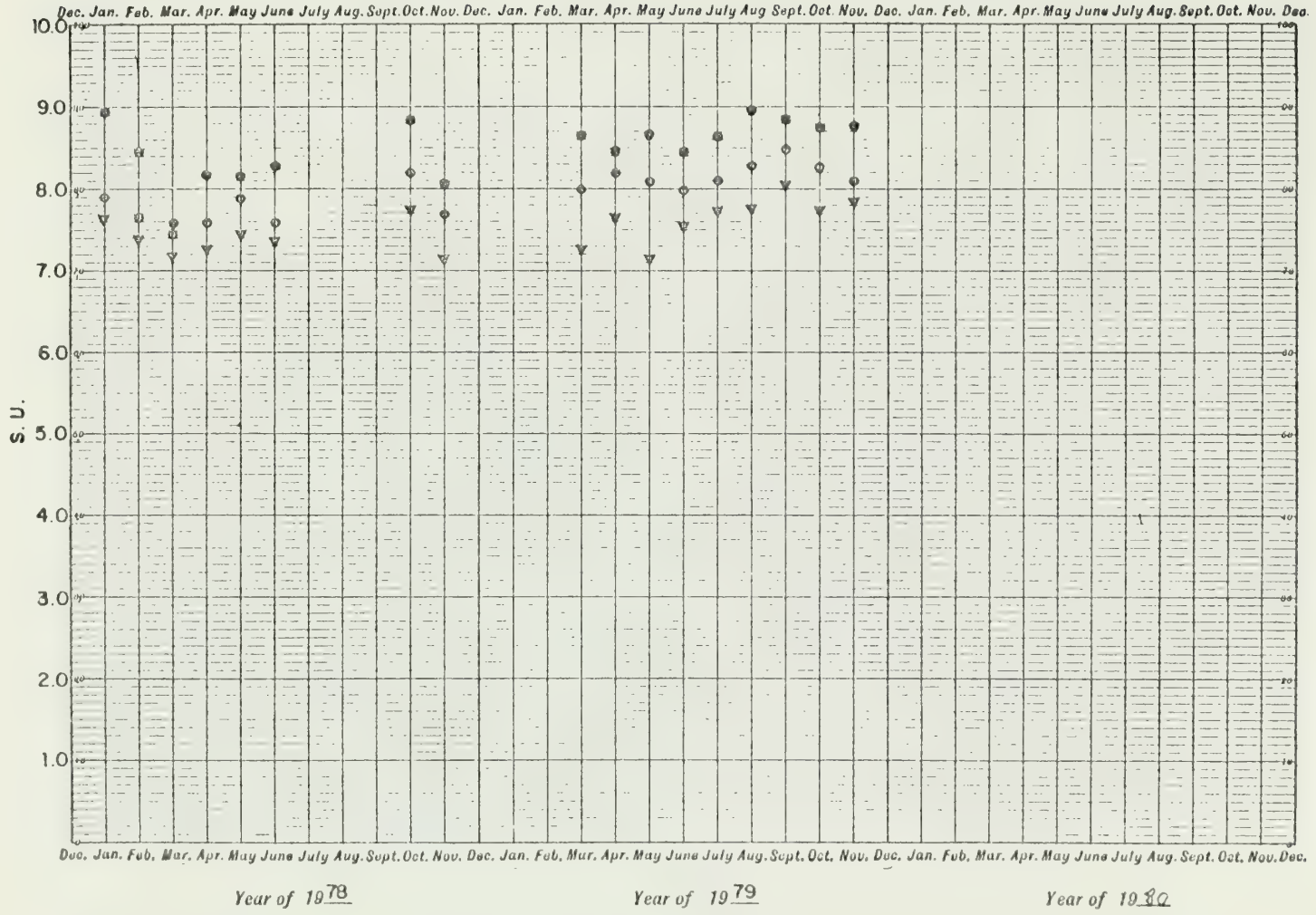
Year of 19___ Year of 19___ Year of 19___


● - maximum
o - mean
▽ - minimum
DISCHARGE POINT 003 SIR GULCH
TSS
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
100
90
80
70
60
50
40
30
20
10
mg/l
(147)
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 19___
Year of 19___
Year of 19___

DISCHARGE POINT 002 CULVERT

pH

● - maximum
o - mean
▽ - minimum

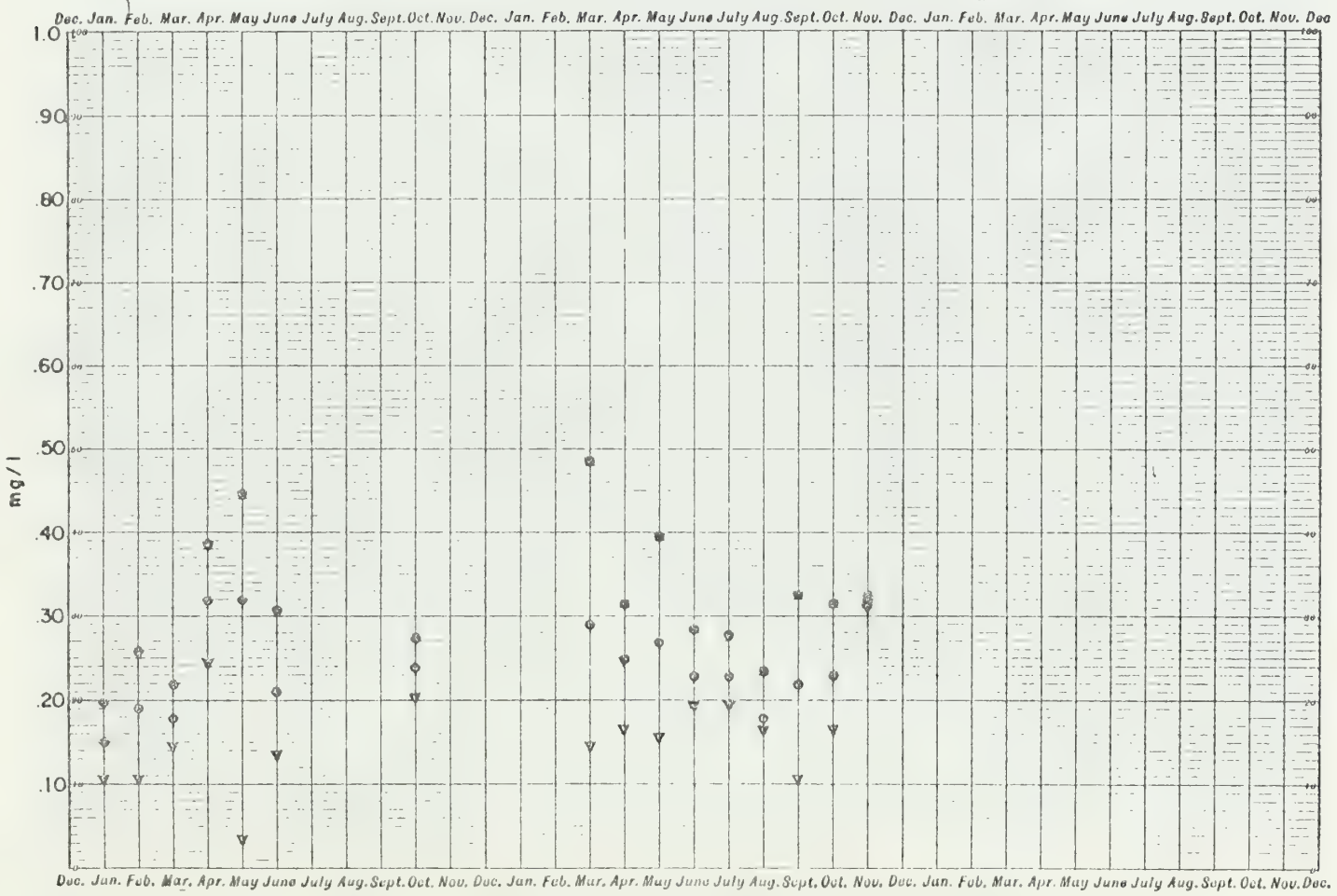


Year of 1978 Year of 1979 Year of 1980

DISCHARGE POINT 002 CULVERT

B

● - maximum
o - mean
▽ - minimum



Year of 19 78

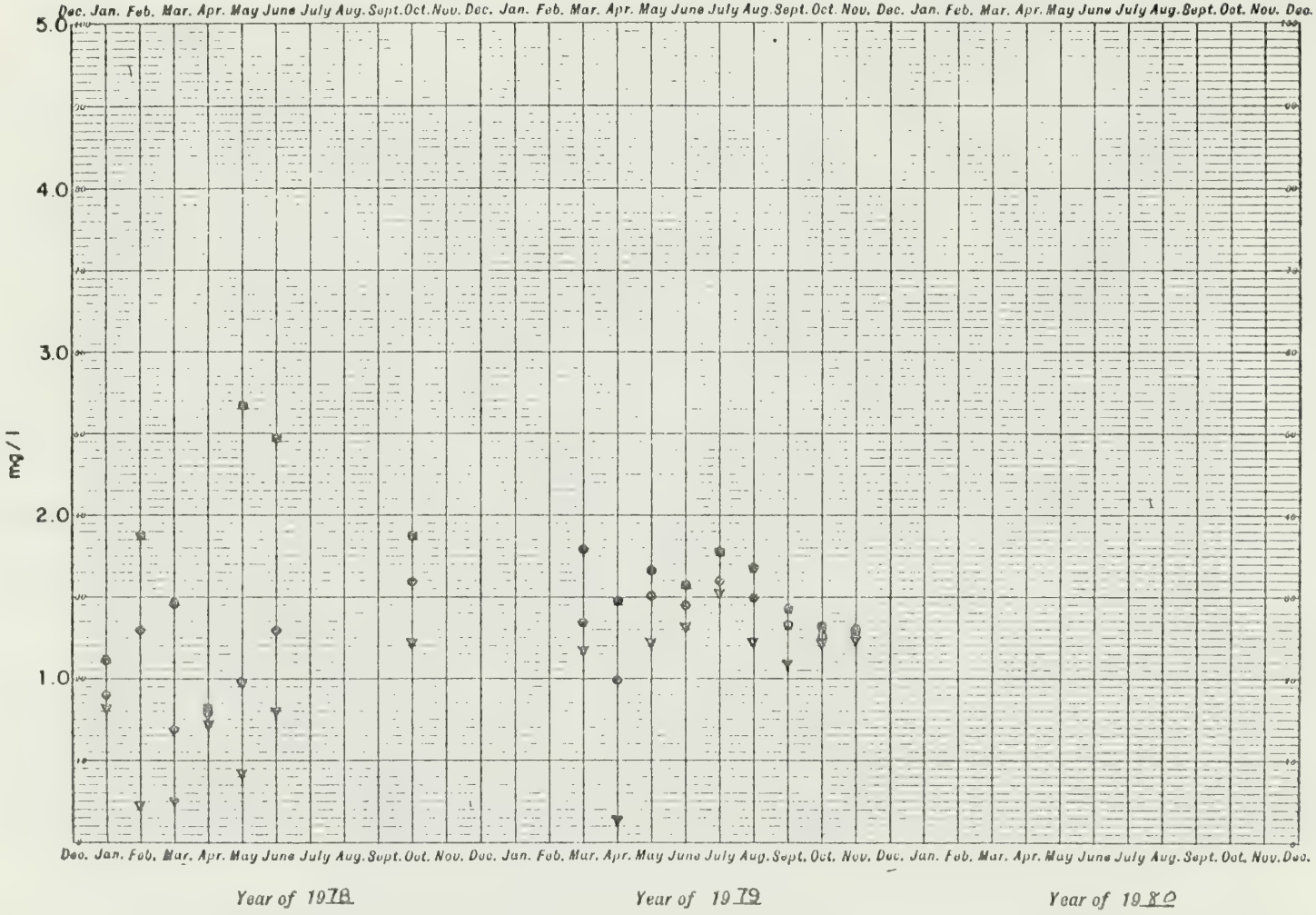
Year of 19 79

Year of 19 80

DISCHARGE POINT 002 CULVERT

F

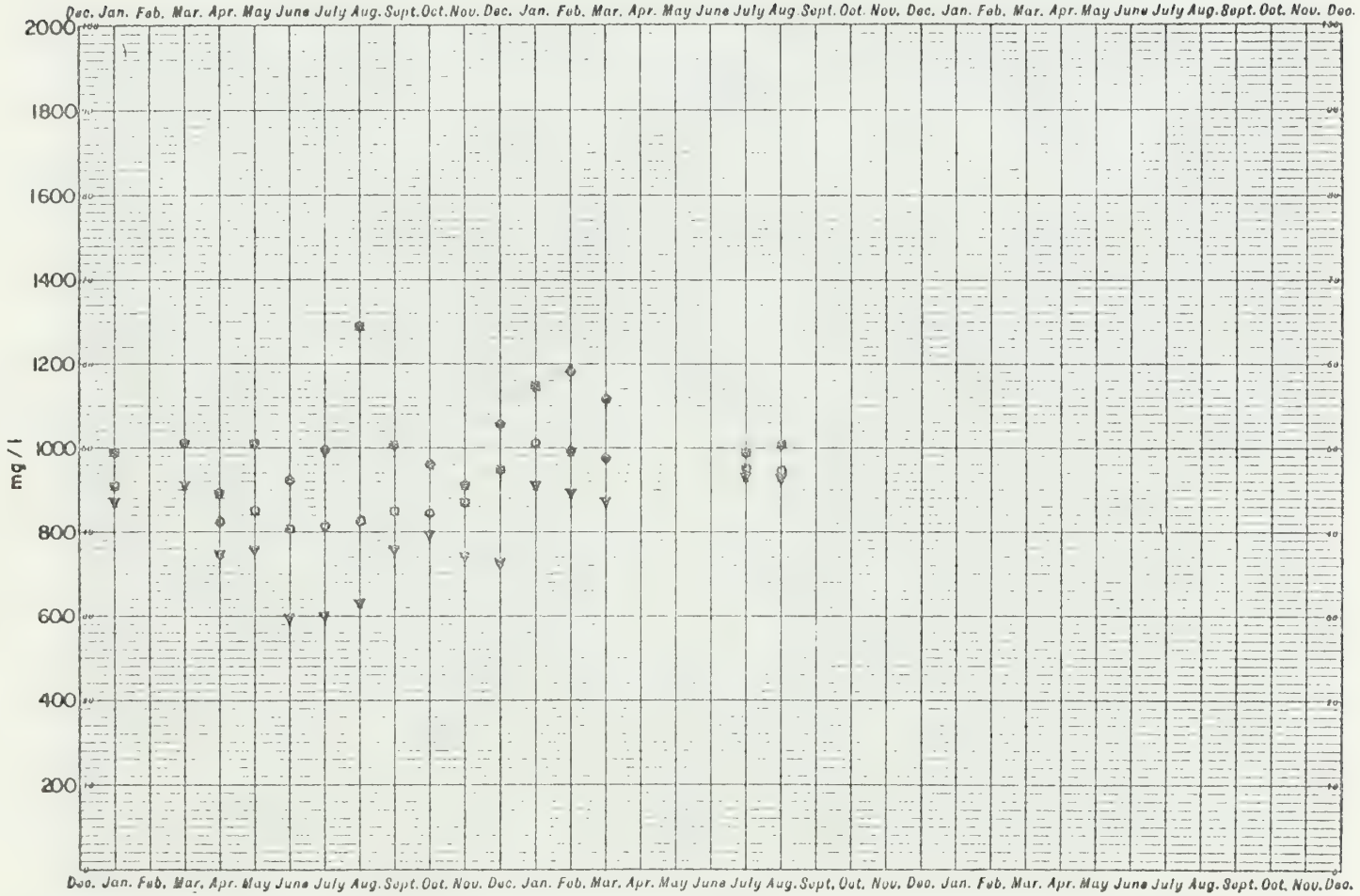
● - maximum
○ - mean
▽ - minimum



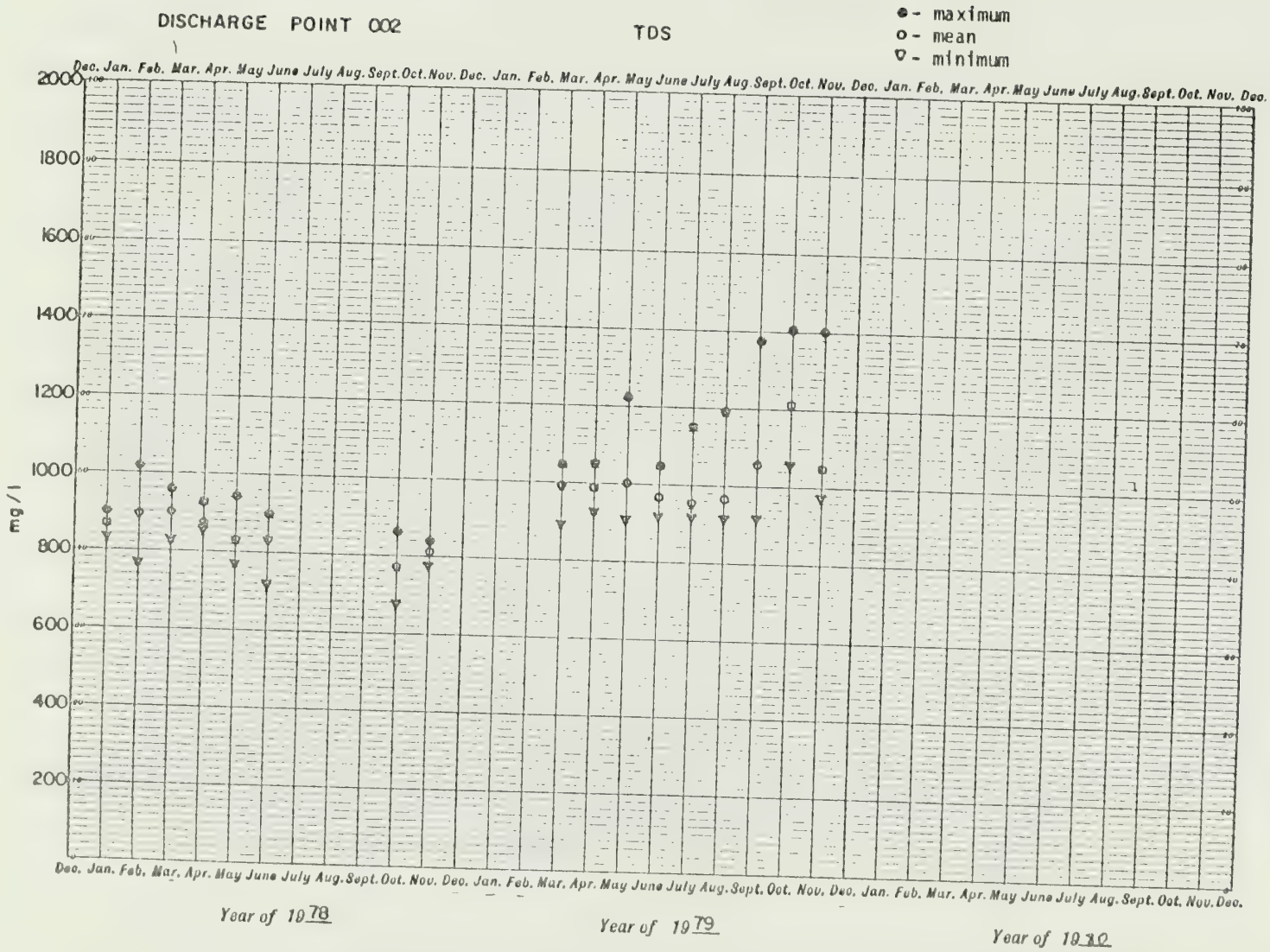
Year of 1978 Year of 1979 Year of 1980

DISCHARGE POINT 001 FLUME TDS

● - maximum
● - mean
▼ - minimum

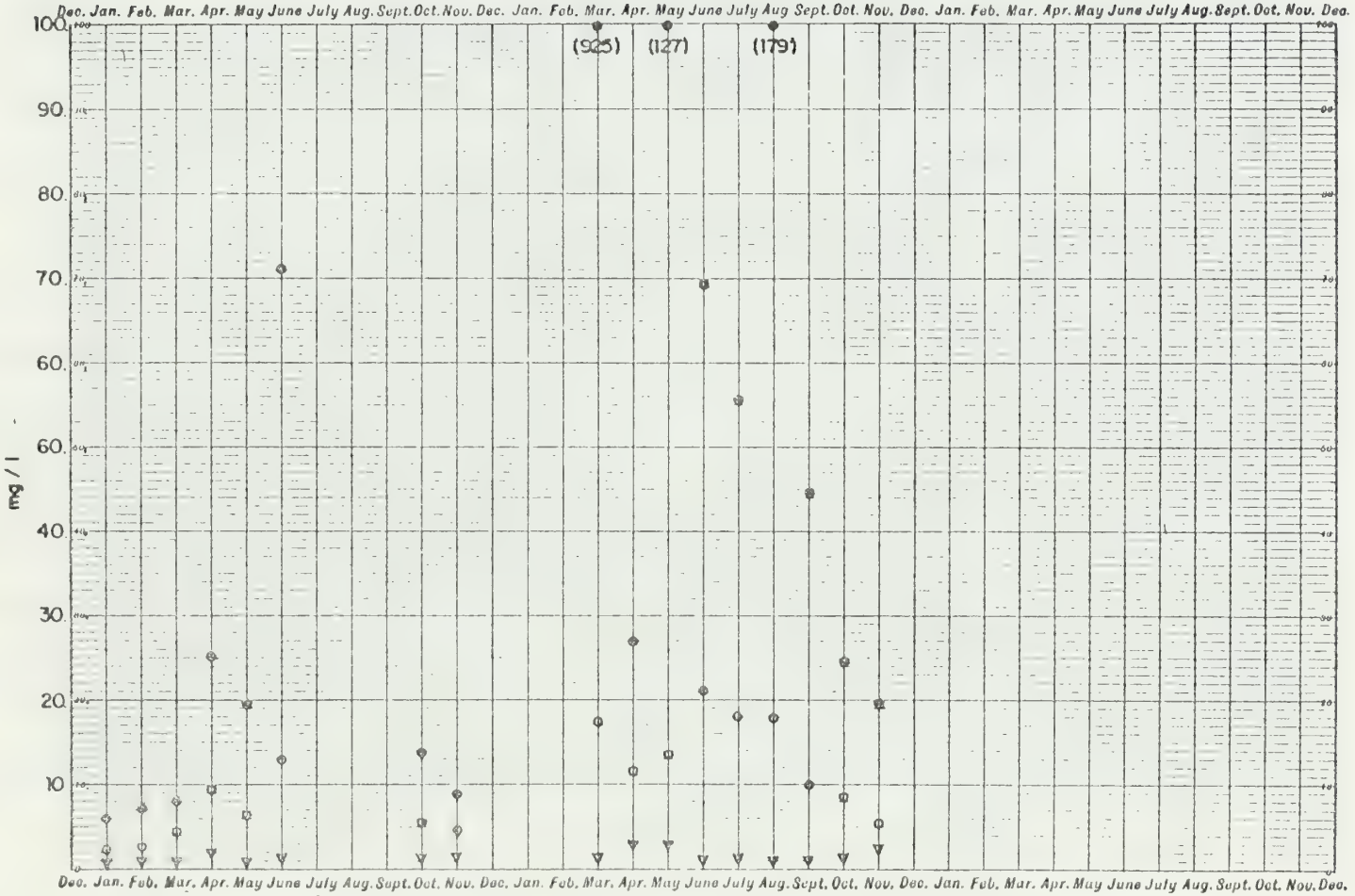


Year of 1978 Year of 1979 Year of 19___


DISCHARGE POINT 002
TDS
● - maximum
o - mean
▽ - minimum
mg/l
2000
1800
1600
1400
1200
1000
800
600
400
200
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1978
Year of 1979
Year of 1980

DISCHARGE POINT 002 CULVERT TSS

● - maximum
o - mean
▽ - minimum

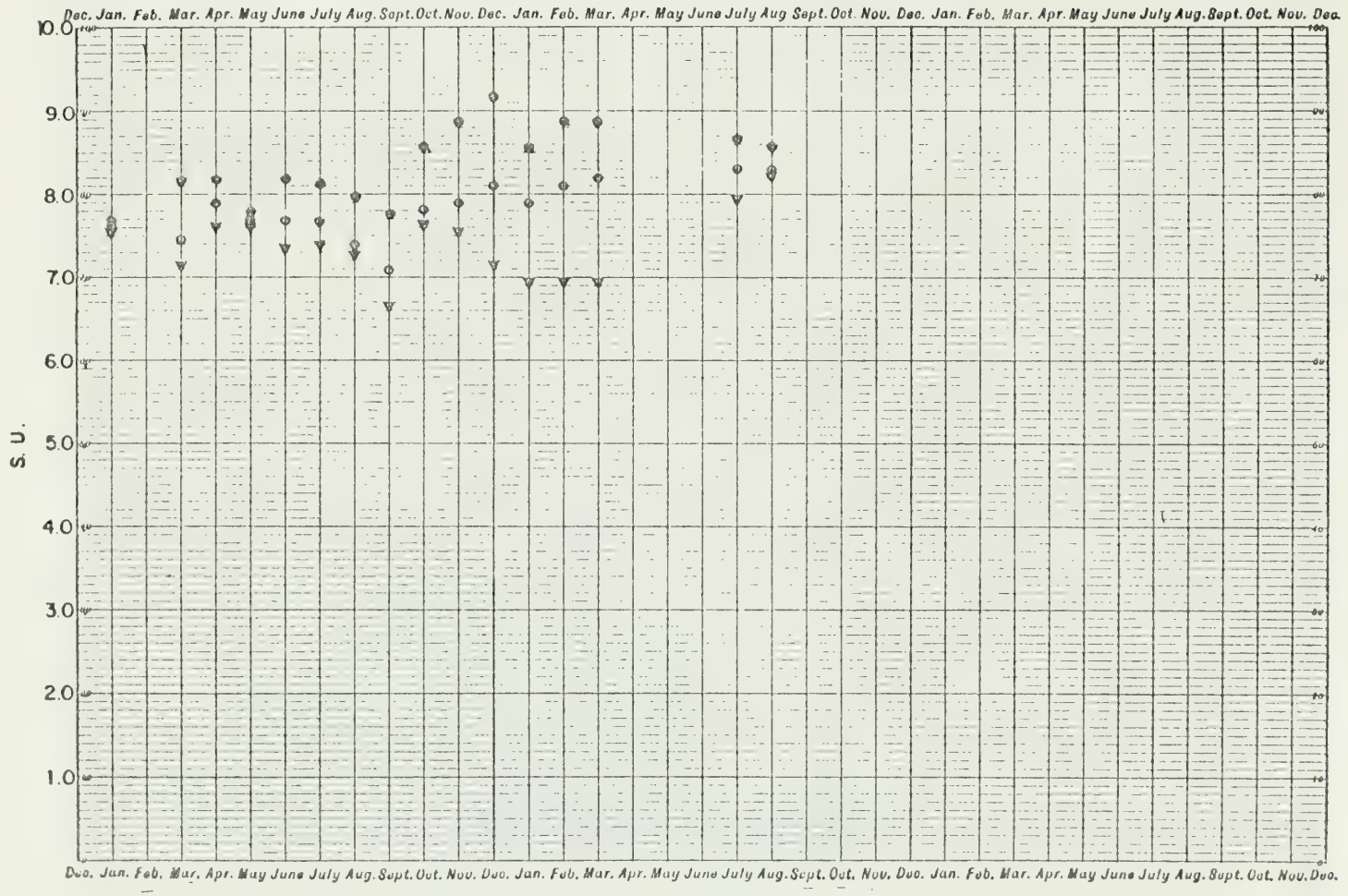


Year of 1978 Year of 1979 Year of 1980

DISCHARGE POINT 001 FLUME

pH

● - maximum
o - mean
▽ - minimum

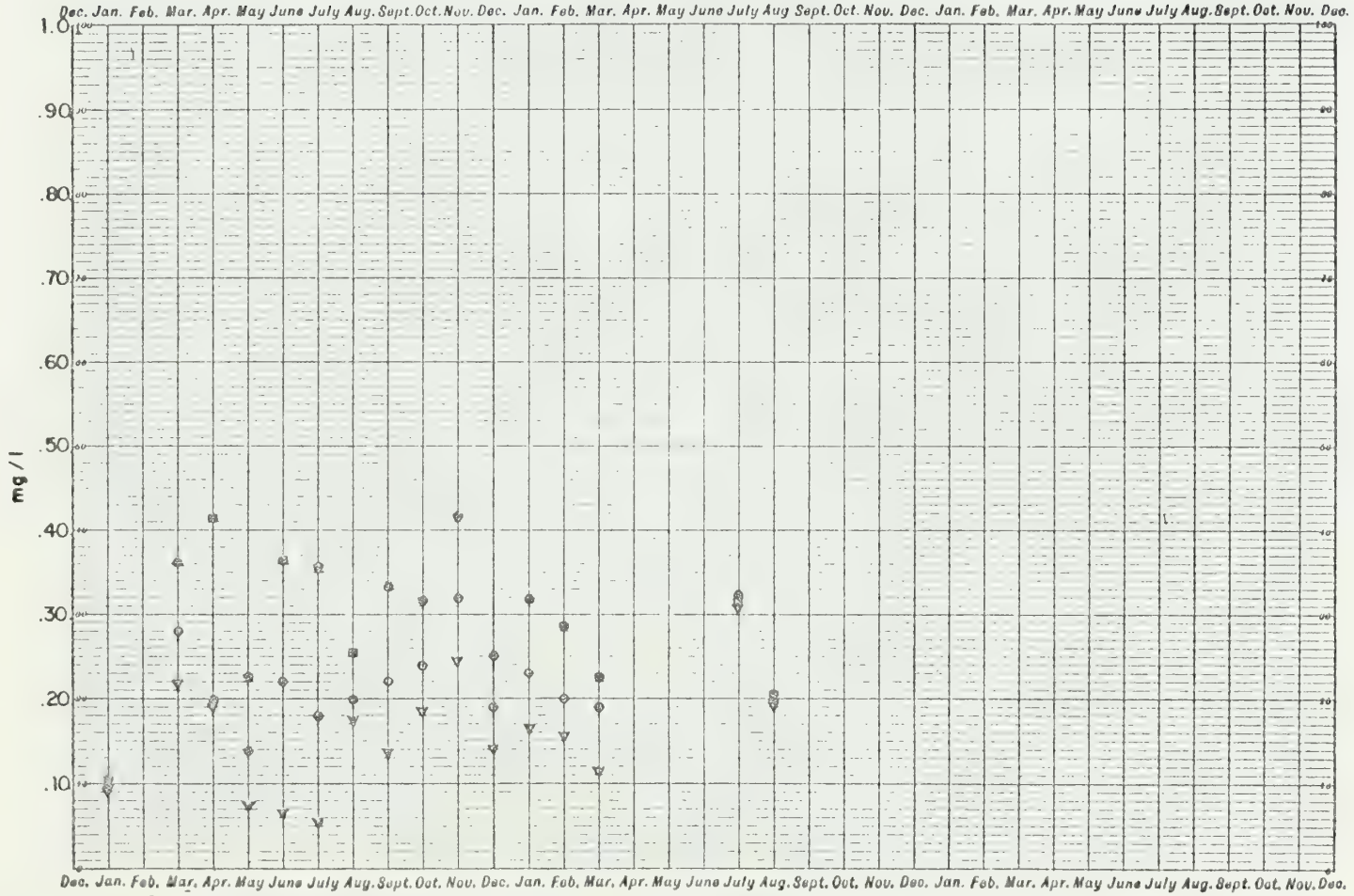


Year of 1978 Year of 1979 Year of 1980

DISCHARGE POINT 001 FLUME

B

● - maximum
o - mean
▽ - minimum



Year of 1978 Year of 1979 Year of 1980

SEDIMENT SAMPLING DESCRIPTION

The U.S.G.S. stream gage just east of the tract on Corral Gulch is at the confluence of Box Elder and Corral Gulch. A reconnaissance of the immediate area on October 13,1979 indicated that there were several small deposits of fine grained material within the 50 yards upstream of the confluence of Box Elder and Corral Gulch. Most of the material in the stream bed was composed of very coarse sediments (cobble size gravel). The coarse material in the middle of the channel graded through pea gravel to some small sand bars and clay deposits along the banks. Channel width varied from two to five feet.

A complete gradation from the bank to the center of the stream occurred right at the weir (upstream) on Corral Gulch. On the north side of the bank was an area about two feet long that graded from clay/silt size deposits six inches wide, through a find sand strip three inches wide through a pea gravel strip about four inches side to cobble size material lining the middle of the channel. The south bank was a mix of cobble, and pea gravel, and sand with some silt/clay coatings. Three samples were taken at this location. The clay/silt bank was sampled. About ½ inch of the top sediment was brown but the underlying sediment was black. The fine brown colored sand and the pea gravel/sand mixture was sampled. The cobble sized material in the main stream was not sampled because too much sample would have been required to give a statistically sound distribution. These materials appeared to be the same materials as the pea sized gravel which was sampled. These cobbles were smooth with no deposits on them.

Corral Gulch at the weir was running swiftly two to three ft/second and no organic growths were observed. Box Elder on the other hand was flowing about two ft/second and organic growths were growing along the banks and formed a large island above the weir about 50 yards up Box Elder Gulch.

Above the weir at Box Elder Gulch small deposits of sand were observed. There were two main types of sediment, pea gravel in the main channel with a few sand bars. Two sand bars were sampled as was a strip across the main stream just above the weir. These two bars appeared to contain the same

material and were combined along the bank downstream of the weir. White crystals encrusted the pebbles. In some areas the crust was rust-brown colored. These crust deposits are mostly sodium bicarbonate. Above the gaging station on Corral Gulch the stream was flowing swiftly enough that the bed was mostly covered with cobble to pea gravel sized pieces of rocks. There was an area about 60 yards upstream where the stream bifurcated and a small low flowing branch had deposited some fine sediment. A sample was obtained at the bifurcation. The surface material was very fine and varied in color from rust through brown to grey. Only the upper 1/8th inch was light colored. Below that the fine grained sediment was black. Another sample of fine sediment was taken from the center of the branch channel.

The island between the two branches of Corral Gulch contained lots of white crust (sodium bicarbonate). Some brown crust was observed but not as much as above Box Elder Gulch. Significant contamination from cattle is apparent all along these two reaches of stream.

Right at the end of the sampling period the flow in Corral Gulch increased noticeably. The stream went from clear to muddy. The velocity in the branch went from ½ ft/second to 1 ft/second and the fine sediment began to move. The flow in the main channel was three to four ft/second.

These samples are being analyzed and the results will be reported later.

APPENDIX 5-2

Groundwater Data

APPENDIX 5-2.1

Alluvial Aquifer Water Quality
Individual Analyses

STATION: 66-S7

	DATE:	12/78	1/79	3/79	4/79	5/79	7/79	10/79
	DEPTH:	27.40	0.00	27.20	24.71	23.33	23.38	25.50
	TEMP:	9	5	7	10	9	11	0
*** WET ANALYSIS ***								
ALUMINUM		0.000	0.000	0.000	0.400	0.000	0.000	0.100
AMMONIA		0.000	0.000	0.000	0.280	0.000	0.000	0.000
ARSENIC		0.000	0.000	0.000	-0.010	0.000	0.000	-0.010
BICARBONATE		421.000	0.000	0.000	400.000	435.000	446.000	459.000
CADMIUM		0.000	0.000	0.000	-0.010	0.000	0.000	0.010
CALCIUM		83.400	42.000	110.000	87.000	105.000	93.000	123.000
CARBONATE		-0.100	0.000	0.000	-0.100	-0.100	-0.100	-0.100
CHLORIDE		45.500	17.000	17.000	20.000	17.000	14.000	41.000
CHROMIUM		0.000	0.000	0.000	-0.010	0.000	0.000	-0.010
COPPER		0.000	0.000	0.000	0.000	0.000	0.000	0.000
FLUORIDE		0.340	0.240	0.330	0.300	0.400	0.100	0.300
HYDROXIDE		0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRON		0.000	0.000	0.000	0.330	0.000	-0.500	-0.050
LEAD		0.000	0.000	0.000	0.010	0.000	0.000	-0.010
MAGNESIUM		41.500	31.000	58.000	57.000	51.000	94.000	59.000
MERCURY		0.000	0.000	0.000	-0.001	0.000	0.000	-0.001
NITRATE		4.000	0.000	0.000	16.000	0.000	113.000	0.000
PHOSPHATE		0.000	0.000	0.000	-0.100	0.000	0.000	0.200
POTASSIUM		0.000	0.000	0.000	2.000	1.300	1.700	1.000
SELENIUM		0.000	0.000	0.000	-0.010	0.000	0.000	-0.010
SILICON DIOXIDE		24.200	22.000	22.000	11.000	21.000	22.000	19.000
SODIUM		110.000	61.000	130.000	110.000	91.000	83.000	106.000
SULFATE		228.000	150.000	370.000	300.000	313.000	382.000	340.000
SULFIDE		0.000	0.000	0.000	-0.200	0.000	0.000	0.200
ZINC		0.000	0.000	0.000	0.500	0.000	0.000	0.040
RADIO. GROSS ALPHA		0.000	0.000	0.000	2.500	0.000	0.000	0.000
RADIO. GROSS BETA		0.000	0.000	0.000	0.000	0.000	0.000	0.000
HARDNESS, TOTAL		0.000	0.000	0.000	0.000	0.000	0.000	0.000
PH		7.200	0.000	7.800	7.400	0.000	7.700	0.000
CONDUCTANCE, SPEC.		1140.000	0.000	1240.000	1420.000	0.000	1300.000	0.000
SOLIDS, TOT. DISS.		0.000	0.000	0.000	840.000	0.000	0.000	924.000
MANGANESE		0.000	0.000	0.000	0.000	0.000	0.000	0.000
ALKALINITY		344.000	280.000	525.000	330.000	355.000	365.000	375.000
CYANIDE		0.000	0.000	0.000	-0.010	0.000	0.000	-0.010
BORON		0.000	0.000	0.000	0.100	0.000	-0.100	0.100
BARIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILVER		0.000	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL		0.000	0.000	0.000	0.000	0.000	0.000	0.000
LITHIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
ORG. CARBON, DISS.		0.000	0.000	0.000	4.500	0.000	6.100	0.300
NITRITE-N		-0.010	0.000	0.000	0.000	0.000	0.000	1.000
BROMIDE		0.000	0.000	0.000	-0.100	0.000	0.000	-0.100
COD		0.000	0.000	0.000	5.000	0.000	0.000	30.000
PHENOLS		0.000	0.000	0.000	-0.001	0.000	0.000	-0.001
KJELDAHL N		0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
STRONTIUM		0.000	0.000	0.000	1.200	0.000	0.000	0.400
VANADIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
PHOSPHATE, ORTHO		0.000	0.000	0.000	0.000	0.000	0.000	0.000
NITROGEN, AMMONIA		0.000	0.000	0.000	0.000	0.000	0.000	0.000
		0.000	0.000	0.000	0.000	0.000	0.000	0.000
MBAS		0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, TOTAL		0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, FECAL		0.000	0.000	0.000	0.000	0.000	0.000	0.000

*** SEMI-QUANTITATIVE ANALYSIS ***

ALUMINUM	0.000	0.000	0.000	0.010	0.000	0.000	0.000
ANTIMONY	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ARSENIC	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BISMUTH	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BORON	0.000	0.000	0.000	0.100	0.000	0.000	0.000
CADMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CALCIUM	0.000	0.000	0.000	5.000	0.000	0.000	0.000
CERIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CESIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHROMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COBALT	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLUMBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COPPER	0.000	0.000	0.000	0.001	0.000	0.000	0.000
DYSPROSIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUROPIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GADOLINIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GALLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GERMANIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GOLD	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HAFNIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HOLMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
INDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRIDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRON	0.000	0.000	0.000	0.010	0.000	0.000	0.000
LANTHANUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LEAD	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LITHIUM	0.000	0.000	0.000	0.010	0.000	0.000	0.000
LUTETIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAGNESIUM	0.000	0.000	0.000	5.000	0.000	0.000	0.000
MANGANESE	0.000	0.000	0.000	0.010	0.000	0.000	0.000
MERCURY	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM	0.000	0.000	0.000	0.010	0.000	0.000	0.000
NEODYMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OSMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PALLADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PLATINUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
POTASSIUM	0.000	0.000	0.000	0.100	0.000	0.000	0.000
PRASEODYMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RUBIDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RHODIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RUBIDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RUTHENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SAMARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SCANDIUM	0.000	0.000	0.000	0.000	0000	0.000	0.000
SELENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILICON	0.000	0.000	0.000	2.000	0.000	0.000	0.000
SILVER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SODIUM	0.000	0.000	0.000??????.000		0.000	0.000	0.000
STRONTIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TANTALUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THALLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THORIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THULIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TITANIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TUNGSTEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
URANIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VANADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
YTTERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
YTTRIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ZINC	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ZIRCONIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000

STATION: 06-58

	DATE:	12/78	1/79	3/79	4/79	5/79	6/79	7/79
	DEPTH:	41.84	42.83	42.50	41.17	35.04	21.50	33.25
	TEMP:	*	6	7	10	10	10	10
*** WET ANALYSIS ***								
ALUMINUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
AMMONIA		0.000	0.000	0.000	0.000	0.000	0.000	0.000
ARSENIC		0.000	0.000	0.000	0.000	0.000	0.000	0.000
BICARBONATE		384.000	0.000	0.000	430.000	410.000	438.000	421.000
CADMIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
CALCIUM		75.400	39.000	93.000	82.000	93.000	80.000	32.000
CARBONATE		-0.100	0.000	0.000	0.100	-0.100	-0.100	-0.100
CHLORIDE		45.500	24.000	14.000	17.000	14.000	14.000	9.000
CHROMIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
COPPER		0.000	0.000	0.000	0.000	0.000	0.000	0.000
FLUORIDE		0.340	0.250	0.320	0.300	0.500	0.200	0.100
HYDROXIDE		0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRON		0.000	0.000	0.000	0.000	0.000	0.000	-0.050
LEAD		0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAGNESIUM		32.900	37.000	49.000	30.000	29.000	34.000	54.000
MERCURY		0.000	0.000	0.000	0.000	0.000	0.000	0.000
NITRATE		3.600	0.000	0.000	0.000	0.000	0.000	1.000
PHOSPHATE		0.000	0.000	0.000	0.000	0.000	0.000	0.000
POTASSIUM		0.000	0.000	0.000	2.000	0.000	0.000	1.300
SELENIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILICON DIOXIDE		21.400	3.400	21.000	15.000	17.000	19.000	21.000
SODIUM		100.000	380.000	76.000	170.000	95.000	55.000	92.000
SULFATE		172.000	330.000	245.000	230.000	210.000	61.000	146.000
SULFIDE		0.000	0.000	0.000	0.000	0.000	0.000	0.000
ZINC		0.000	0.000	0.000	0.000	0.000	0.000	0.000
RADIO. GROSS ALPHA		0.000	0.000	0.000	0.000	0.000	0.000	0.000
RADIO. GROSS BETA		0.000	0.000	0.000	0.000	0.000	0.000	0.000
HARDNESS, TOTAL		0.000	0.000	0.000	0.000	0.000	0.000	0.000
PH		7.400	0.000	7.300	7.000	7.200	7.000	7.100
CONDUCTANCE, SPEC.		1000.000	0.000	1000.000	1260.000	0.000	1300.000	1000.000
SOLIDS, TOT. DISS.		0.000	0.000	0.000	0.000	0.000	0.000	0.000
MANGANESE		0.000	0.000	0.000	0.000	0.000	0.000	0.000
ALKALINITY		314.000	255.000	655.000	350.000	340.000	359.000	344.000
CYANIDE		0.000	0.000	0.000	0.000	0.000	0.000	0.000
BORON		0.000	0.000	0.000	0.000	0.000	0.000	-0.100
BARIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILVER		0.000	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL		0.000	0.000	0.000	0.000	0.000	0.000	0.000
LITHIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
ORG. CARBON, DISS.		0.000	0.000	0.000	0.000	0.000	0.000	6.500
NITRITE-N		-0.010	0.000	0.000	0.000	0.000	0.000	0.000
BROMIDE		0.000	0.000	0.000	0.000	0.000	0.000	0.000
COD		0.000	0.000	0.000	0.000	0.000	0.000	0.000
PHENOLS		0.000	0.000	0.000	0.000	0.000	0.000	0.000
KJELDAHL N		0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
STRONTIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
VANADIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
PHOSPHATE, ORTHO		0.000	0.000	0.000	0.000	0.000	0.000	0.000
NITROGEN, AMMONIA		0.000	0.000	0.000	0.000	0.000	0.000	0.000
		0.000	0.000	0.000	0.000	0.000	0.000	0.000
MBAS		0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, TOTAL		0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, FECAL		0.000	0.000	0.000	0.000	0.000	0.000	0.000

STATION: GS-SUAB

DATE:	2/79	3/79	4/79	5/79	7/79
DEPTH:	47.48	43.92	40.02	31.67	40.46
TEMP:	6	8	11	9	10
*** WET ANALYSIS ***					
ALUMINUM	0.000	0.000	-0.100	0.000	0.000
AMMONIA	0.000	0.000	0.700	0.000	0.000
ARSENIC	0.000	0.000	-0.010	0.000	0.000
BICARBONATE	670.000	0.000	680.000	750.000	892.000
CADMIUM	0.000	0.000	-0.010	0.000	0.000
CALCIUM	120.000	130.000	150.000	85.000	89.000
CARBONATE	0.000	0.000	-0.100	-0.100	-0.100
CHLORIDE	45.000	37.000	31.000	31.000	16.000
CHROMIUM	0.000	0.000	-0.010	0.000	0.000
COPPER	0.000	0.000	0.000	0.000	0.000
FLUORIDE	0.400	0.300	0.300	0.400	0.100
HYDROXIDE	0.000	0.000	0.000	0.000	0.000
IRON	0.000	0.000	0.050	0.000	-0.050
LEAD	0.000	0.000	0.020	0.000	0.000
MAGNESIUM	150.000	170.000	200.000	135.000	153.000
MERCURY	0.000	0.000	0.001	0.000	0.000
NITRATE	14.000	0.000	7.000	6.000	4.100
PHOSPHATE	0.000	0.000	-0.100	0.000	0.000
POTASSIUM	3.300	0.000	3.000	2.000	3.300
SELENIUM	0.000	0.000	-0.010	0.000	0.000
SILICON DIOXIDE	24.000	26.000	18.000	38.000	16.000
SODIUM	210.000	270.000	200.000	230.000	190.000
SULFATE	680.000	1000.000	920.000	615.000	432.000
SULFIDE	0.000	0.000	-0.200	0.000	0.000
ZINC	0.000	0.000	0.700	0.000	0.000
RADIO. GROSS ALPHA	0.000	0.000	12.000	0.000	0.000
RADIO. GROSS BETA	0.000	0.000	0.000	0.000	0.000
HARDNESS, TOTAL	900.000	0.000	0.000	0.000	0.000
PH	7.900	7.600	7.200	7.400	0.000
CONDUCTANCE, SPEC.	2350.000	2400.000	2800.000	0.000	0.000
SOLIDS, TOT. DISS.	0.000	0.000	1730.000	0.000	0.000
MANGANESE	0.000	0.000	0.000	0.000	0.000
ALKALINITY	550.000	575.000	560.000	615.000	730.000
CYANIDE	0.000	0.000	-0.010	0.000	0.000
BORON	0.300	0.000	0.200	0.000	0.200
BARIUM	0.000	0.000	0.000	0.000	0.000
SILVER	0.000	0.000	0.000	0.000	0.000
NICKEL	0.000	0.000	0.000	0.000	0.000
LITHIUM	0.000	0.000	0.000	0.000	0.000
ORG. CARBON, DISS.	0.000	0.000	12.000	0.000	11.000
NITRITE-N	0.000	0.000	0.000	0.000	0.000
BROMIDE	0.000	0.000	-0.100	0.000	0.000
COD	0.000	0.000	15.000	0.000	0.000
PHENOLS	0.000	0.000	0.001	0.000	0.000
KJELDAHL N	0.000	0.000	0.000	0.000	0.000
BERYLLIUM	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM	0.000	0.000	0.000	0.000	0.000
STRONTIUM	0.000	0.000	3.500	0.000	0.000
VANADIUM	0.000	0.000	0.000	0.000	0.000
PHOSPHATE, ORTHO	0.000	0.000	0.000	0.000	0.000
NITROGEN, AMMONIA	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000
MBAS	0.000	0.000	0.000	0.000	0.000
COLIFORM, TOTAL	0.000	0.000	0.000	0.000	0.000
COLIFORM, FECAL	0.000	0.000	0.000	0.000	0.000

ARSENIC	0.000	0.000	0.000	0.000	0.000
BARIUM	0.000	0.000	0.000	0.000	0.000
BERYLLIUM	0.000	0.000	0.000	0.000	0.000
BISMUTH	0.000	0.000	0.000	0.000	0.000
BORON	0.000	0.000	0.100	0.000	0.000
CADMIUM	0.000	0.000	0.000	0.000	0.000
CALCIUM	0.000	0.000	99999.000	0.000	0.000
CERIUM	0.000	0.000	0.000	0.000	0.000
CESIUM	0.000	0.000	0.000	0.000	0.000
CHROMIUM	0.000	0.000	0.000	0.000	0.000
COBALT	0.000	0.000	0.000	0.000	0.000
COLUMBIUM	0.000	0.000	0.000	0.000	0.000
COPPER	0.000	0.000	0.001	0.000	0.000
DYSPROSIUM	0.000	0.000	0.000	0.000	0.000
ERBIUM	0.000	0.000	0.000	0.000	0.000
EUROPIUM	0.000	0.000	0.000	0.000	0.000
GADOLINIUM	0.000	0.000	0.000	0.000	0.000
GALLIUM	0.000	0.000	0.000	0.000	0.000
GERMANIUM	0.000	0.000	0.000	0.000	0.000
GOLD	0.000	0.000	0.000	0.000	0.000
HAFNIUM	0.000	0.000	0.000	0.000	0.000
HOLMIUM	0.000	0.000	0.000	0.000	0.000
INDIUM	0.000	0.000	0.000	0.000	0.000
IRIDIUM	0.000	0.000	0.000	0.000	0.000
IRON	0.000	0.000	0.100	0.000	0.000
LANTHANUM	0.000	0.000	0.000	0.000	0.000
LEAD	0.000	0.000	0.000	0.000	0.000
LITHIUM	0.000	0.000	0.000	0.000	0.000
LUTETIUM	0.000	0.000	0.000	0.000	0.000
MAGNESIUM	0.000	0.000	99999.000	0.000	0.000
MANGANESE	0.000	0.000	0.010	0.000	0.000
MERCURY	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM	0.000	0.000	0.010	0.000	0.000
NEODYMIUM	0.000	0.000	0.000	0.000	0.000
NICKEL	0.000	0.000	0.000	0.000	0.000
OSMIUM	0.000	0.000	0.000	0.000	0.000
PALLADIUM	0.000	0.000	0.000	0.000	0.000
PLATINUM	0.000	0.000	0.000	0.000	0.000
POTASSIUM	0.000	0.000	0.100	0.000	0.000
PRASEODYMIUM	0.000	0.000	0.000	0.000	0.000
RADIUM	0.000	0.000	0.000	0.000	0.000
RHENIUM	0.000	0.000	0.000	0.000	0.000
RHODIUM	0.000	0.000	0.000	0.000	0.000
RUBIDIUM	0.000	0.000	0.000	0.000	0.000
RUTHENIUM	0.000	0.000	0.000	0.000	0.000
SAMARIUM	0.000	0.000	0.000	0.000	0.000
SCANDIUM	0.000	0.000	0.000	0.000	0.000
SELENIUM	0.000	0.000	0.000	0.000	0.000
SILICON	0.000	0.000	5.000	0.000	0.000
SILVER	0.000	0.000	0.000	0.000	0.000
SODIUM	0.000	0.000	2.000	0.000	0.000
STRONTIUM	0.000	0.000	0.100	0.000	0.000
TANTALUM	0.000	0.000	0.000	0.000	0.000
TERBIUM	0.000	0.000	0.000	0.000	0.000
THALLIUM	0.000	0.000	0.000	0.000	0.000
THORIUM	0.000	0.000	0.000	0.000	0.000
THULIUM	0.000	0.000	0.000	0.000	0.000
TIN	0.000	0.000	0.000	0.000	0.000
TITANIUM	0.000	0.000	0.001	0.000	0.000
TUNGSTEN	0.000	0.000	0.000	0.000	0.000
URANIUM	0.000	0.000	0.000	0.000	0.000
VANADIUM	0.000	0.000	0.000	0.000	0.000
YTTERBIUM	0.000	0.000	0.000	0.000	0.000
YTTRIUM	0.000	0.000	0.000	0.000	0.000
ZINC	0.000	0.000	0.000	0.000	0.000
ZIRCONIUM	0.000	0.000	0.000	0.000	0.000

STATION: 0S-S11D

	DATE:	2/79	3/79	4/79	5/79	7/79	10/79
	DEPTH:	41.18	38.73	35.58	21.29	32.94	37.70
	TEMP:	8	9	10	9	10	0
*** NET ANALYSIS ***							
ALUMINUM		0.000	0.000	-0.100	0.000	0.000	0.100
AMMONIA		0.000	0.000	0.420	0.000	0.000	-0.300
ARSENIC		0.000	0.000	-0.010	0.000	0.000	-0.010
BICARBONATE		600.000	0.000	620.000	580.000	597.000	605.000
CADMIUM		0.000	0.000	-0.010	0.000	0.000	-0.010
CALCIUM		120.000	115.000	130.000	200.000	248.000	248.000
CARBONATE		0.000	0.000	-0.100	-0.100	-0.100	-0.100
CHLORIDE		21.000	27.000	24.000	31.000	34.000	23.000
CHROMIUM		0.000	0.000	-0.010	0.000	0.000	-0.010
COPPER		0.000	0.000	0.000	0.000	0.000	0.000
FLUORIDE		0.400	0.290	0.300	0.200	-0.100	0.000
HYDROXIDE		0.000	0.000	0.000	0.000	0.000	0.000
IRON		0.000	0.000	0.230	0.000	-0.050	-0.050
LEAD		0.000	0.000	-0.010	0.000	0.000	0.030
MAGNESIUM		110.000	120.000	130.000	115.000	206.000	156.000
MERCURY		0.000	0.000	-0.001	0.000	0.000	-0.001
NITRATE		12.000	0.000	11.000	0.000	5.500	0.000
PHOSPHATE		0.000	0.000	-0.100	0.000	0.000	-0.100
POTASSIUM		3.000	0.000	4.000	4.000	7.000	16.000
SELENIUM		0.000	0.000	-0.010	0.000	0.000	-0.010
SILICON DIOXIDE		25.000	25.000	22.000	28.000	20.000	24.000
SODIUM		240.000	250.000	190.000	210.000	330.000	300.000
SULFATE		700.000	785.000	650.000	900.000	1590.000	1290.000
SULFIDE		0.000	0.000	-0.200	0.000	0.000	0.000
ZINC		0.000	0.000	0.700	0.000	0.000	0.040
RADIO. GROSS ALPHA		0.000	0.000	25.000	0.000	0.000	0.000
RADIO. GROSS BETA		0.000	0.000	0.000	0.000	0.000	0.000
HARDNESS, TOTAL		740.000	0.000	0.000	0.000	0.000	0.000
PH		7.800	7.600	0.000	0.000	7.700	0.000
CONDUCTANCE, SPEC.		1900.000	2050.000	0.000	0.000	3125.000	0.000
SOLIDS, TOT. DISS.		0.000	0.000	1550.000	0.000	0.000	2500.000
MANGANESE		0.000	0.000	0.000	0.000	0.000	0.000
ALKALINITY		500.000	600.000	510.000	475.000	488.000	495.000
CYANIDE		0.000	0.000	-0.010	0.000	0.000	0.000
BORON		0.100	0.000	0.200	0.000	0.100	0.300
BARIUM		0.000	0.000	0.000	0.000	0.000	0.000
SILVER		0.000	0.000	0.000	0.000	0.000	0.000
NICKEL		0.000	0.000	0.000	0.000	0.000	0.000
LITHIUM		0.000	0.000	0.000	0.000	0.000	0.000
ORG. CARBON, DISS.		0.000	0.000	4.900	0.000	13.000	28.000
NITRITE N		0.000	0.000	0.000	0.000	0.000	3.000
BROMIDE		0.000	0.000	-0.100	0.000	0.000	0.100
COD		0.000	0.000	5.000	0.000	0.000	1.000
PHENOLS		0.000	0.000	-0.001	0.000	0.000	0.000
KJELDAHL N		0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM		0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM		0.000	0.000	0.000	0.000	0.000	0.000
STRONTIUM		0.000	0.000	2.300	0.000	0.000	1.400
VANADIUM		0.000	0.000	0.000	0.000	0.000	0.000
PHOSPHATE, ORTHO		0.000	0.000	0.000	0.000	0.000	0.000
NITROGEN, AMMONIA		0.000	0.000	0.000	0.000	0.000	0.000
		0.000	0.000	0.000	0.000	0.000	0.000
MBAS		0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, TOTAL		0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, FECAL		0.000	0.000	0.000	0.000	0.000	0.000

ANTIMONY	0.000	0.000	0.000	0.000	0.000	0.000
ARSENIC	0.000	0.000	0.000	0.000	0.000	0.000
BARIUM	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM	0.000	0.000	0.000	0.000	0.000	0.000
BISMUTH	0.000	0.000	0.000	0.000	0.000	0.000
BORON	0.000	0.000	0.100	0.000	0.000	0.000
CADMIUM	0.000	0.000	0.000	0.000	0.000	0.000
CALCIUM	0.000	0.00099999.000		0.000	0.000	0.000
CERIUM	0.000	0.000	0.000	0.000	0.000	0.000
CESIUM	0.000	0.000	0.000	0.000	0.000	0.000
CHROMIUM	0.000	0.000	0.000	0.000	0.000	0.000
COBALT	0.000	0.000	0.000	0.000	0.000	0.000
COLUMBIUM	0.000	0.000	0.000	0.000	0.000	0.000
COPPER	0.000	0.000	0.001	0.000	0.000	0.000
DYSPROSIUM	0.000	0.000	0.000	0.000	0.000	0.000
ERBIUM	0.000	0.000	0.000	0.000	0.000	0.000
EUROPIUM	0.000	0.000	0.000	0.000	0.000	0.000
GADOLINIUM	0.000	0.000	0.000	0.000	0.000	0.000
GALLIUM	0.000	0.000	0.000	0.000	0.000	0.000
GERMANIUM	0.000	0.000	0.000	0.000	0.000	0.000
GOLD	0.000	0.000	0.000	0.000	0.000	0.000
HAFNIUM	0.000	0.000	0.000	0.000	0.000	0.000
HOLMIUM	0.000	0.000	0.000	0.000	0.000	0.000
INDIUM	0.000	0.000	0.000	0.000	0.000	0.000
IRIDIUM	0.000	0.000	0.000	0.000	0.000	0.000
IRON	0.000	0.000	0.010	0.000	0.000	0.000
LANTHANUM	0.000	0.000	0.000	0.000	0.000	0.000
LEAD	0.000	0.000	0.000	0.000	0.000	0.000
LITHIUM	0.000	0.000	0.010	0.000	0.000	0.000
LUTETIUM	0.000	0.000	0.000	0.000	0.000	0.000
MAGNESIUM	0.000	0.00099999.000		0.000	0.000	0.000
MANGANESE	0.000	0.000	0.010	0.000	0.000	0.000
MERCURY	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM	0.000	0.000	0.005	0.000	0.000	0.000
NEODYMIUM	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL	0.000	0.000	0.000	0.000	0.000	0.000
OSMIUM	0.000	0.000	0.000	0.000	0.000	0.000
PALLADIUM	0.000	0.000	0.000	0.000	0.000	0.000
PLATINUM	0.000	0.000	0.000	0.000	0.000	0.000
POTASSIUM	0.000	0.000	0.100	0.000	0.000	0.000
PRASEODYMIUM	0.000	0.000	0.000	0.000	0.000	0.000
RADIUM	0.000	0.000	0.000	0.000	0.000	0.000
RHENIUM	0.000	0.000	0.000	0.000	0.000	0.000
RHODIUM	0.000	0.000	0.000	0.000	0.000	0.000
RUBIDIUM	0.000	0.000	0.000	0.000	0.000	0.000
RUTHENIUM	0.000	0.000	0.000	0.000	0.000	0.000
SAMARIUM	0.000	0.000	0.000	0.000	0.000	0.000
SCANDIUM	0.000	0.000	0.000	0.000	0.000	0.000
SELENIUM	0.000	0.000	0.000	0.000	0.000	0.000
SILICON	0.000	0.000	2.000	0.000	0.000	0.000
SILVER	0.000	0.000	0.000	0.000	0.000	0.000
SODIUM	0.000	0.000	5.000	0.000	0.000	0.000
STRONTIUM	0.000	0.000	0.100	0.000	0.000	0.000
TANTALUM	0.000	0.000	0.000	0.000	0.000	0.000
TERBIUM	0.000	0.000	0.000	0.000	0.000	0.000
THALLIUM	0.000	0.000	0.000	0.000	0.000	0.000
THORIUM	0.000	0.000	0.000	0.000	0.000	0.000
THULIUM	0.000	0.000	0.000	0.000	0.000	0.000
TIN	0.000	0.000	0.000	0.000	0.000	0.000
TITANIUM	0.000	0.000	0.000	0.000	0.000	0.000
TUNGSTEN	0.000	0.000	0.000	0.000	0.000	0.000
URANIUM	0.000	0.000	0.000	0.000	0.000	0.000
VANADIUM	0.000	0.000	0.000	0.000	0.000	0.000
YTTERBIUM	0.000	0.000	0.000	0.000	0.000	0.000
YTTRIUM	0.000	0.000	0.000	0.000	0.000	0.000
ZINC	0.000	0.000	0.000	0.000	0.000	0.000
ZIRCONIUM	0.000	0.000	0.000	0.000	0.000	0.000

STATION: GS-SLIS

	DATE:	6/79	7/79
	DEPTH:	23.79	39.90
	TEMP:	?	16
*** WET ANALYSIS ***			
ALUMINUM		0.000	0.000
AMMONIA		0.000	0.000
ARSENIC		0.000	0.000
BICARBONATE		0.000	540.000
CADMIUM		0.000	0.000
CALCIUM		0.000	98.000
CARBONATE		0.000	-0.100
CHLORIDE		0.000	14.000
CHROMIUM		0.000	0.000
COPPER		0.000	0.000
FLUORIDE		0.000	0.100
HYDROXIDE		0.000	0.000
IRON		0.000	-0.050
LEAD		0.000	0.000
MAGNESIUM		0.000	184.000
MERCURY		0.000	0.000
NITRATE		0.000	2.200
PHOSPHATE		0.000	0.000
POTASSIUM		0.000	4.500
SELENIUM		0.000	0.000
SILICON DIOXIDE		0.000	27.000
SODIUM		0.000	190.000
SULFATE		0.000	961.000
SULFIDE		0.000	0.000
ZINC		0.000	0.000
RADIO. GROSS ALPHA		0.000	7.500
RADIO. GROSS BETA		0.000	37.000
HARDNESS, TOTAL		0.000	0.000
PH		7.300	7.500
CONDUCTANCE, SPEC.		2700.000	2400.000
SOLIDS, TOT. DISS.		0.000	0.000
MANGANESE		0.000	0.000
ALKALINITY		0.000	442.000
CYANIDE		0.000	0.000
BORON		0.000	0.100
BARIUM		0.000	0.000
SILVER		0.000	0.000
NICKEL		0.000	0.000
LITHIUM		0.000	0.000
ORG. CARBON, DISS.		0.000	9.500
NITRITE-N		0.000	0.000
BROMIDE		0.000	0.000
COD		0.000	0.000
PHENOLS		0.000	0.000
[illegible] N		0.000	0.000
BERYLLIUM		0.000	0.000
MOLYBDENUM		0.000	0.000
STRONTIUM		0.000	0.000
VANADIUM		0.000	0.000
PHOSPHATE, ORTHO		0.000	0.000
NITROGEN, AMMONIA		0.000	0.000
		0.000	0.000
MBAS		0.000	0.000
COLIFORM, TOTAL		0.000	0.000
COLIFORM, FECAL		0.000	0.000

$

STATION: BS-S27

DATE:	1/79	2/79	3/79	4/79	5/79	7/79	9/79	10/79	10/79
DEPTH:	0.00	17.15	15.81	21.17	24.67	29.59	31.50	32.40	32.40
TEMP:	7	8	8	8	11	10	0	8	0
*** WET ANALYSIS ***									
ALUMINUM	0.000	0.000	0.000	-0.100	0.000	0.000	0.000	0.000	0.100
AMMONIA	0.000	0.000	0.000	0.420	0.000	0.000	0.000	0.000	-0.300
ARSENIC	0.000	0.000	0.000	-0.010	0.000	0.000	0.000	0.000	-0.010
BICARBONATE	0.000	570.000	0.000	600.000	560.000	579.000	512.000	569.000	569.000
CADMIUM	0.000	0.000	0.000	-0.010	0.000	0.000	0.000	0.000	-0.010
CALCIUM	41.000	100.000	115.000	110.000	110.000	86.000	98.900	103.000	120.000
CARBONATE	0.000	0.000	0.000	-0.100	-0.100	-0.100	15.600	0.000	-0.100
CHLORIDE	17.000	10.000	17.000	14.000	17.000	14.000	10.000	11.400	10.000
CHROMIUM	0.000	0.000	0.000	-0.010	0.000	0.000	0.000	0.000	0.010
COPPER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FLUORIDE	0.170	0.300	0.280	0.300	0.500	0.100	0.250	0.300	0.000
HYDROXIDE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRON	0.000	0.000	0.000	0.190	0.000	-0.050	0.030	0.000	-0.050
LEAD	0.000	0.000	0.000	-0.010	0.000	0.000	0.000	0.000	0.020
MAGNESIUM	55.000	73.000	90.000	77.000	74.000	94.000	80.800	85.400	79.000
MERCURY	0.000	0.000	0.000	-0.001	0.000	0.000	0.000	0.000	-0.001
NITRATE	0.000	1.600	0.000	1.800	0.000	0.200	0.060	0.037	0.000
PHOSPHATE	0.000	0.000	0.000	-0.100	0.000	0.000	0.000	0.000	-0.100
POTASSIUM	0.000	3.000	0.000	3.000	2.300	2.700	4.000	5.000	3.000
SELENIUM	0.000	0.000	0.000	-0.010	0.000	0.000	0.000	0.000	-0.010
SILICON DIOXIDE	2.900	21.000	23.000	17.000	23.000	21.000	21.800	15.000	17.000
SODIUM	125.000	200.000	165.000	170.000	140.000	123.000	122.000	144.000	155.000
SULFATE	285.000	490.000	520.000	400.000	430.000	306.000	390.000	394.000	493.000
SULFIDE	0.000	0.000	0.000	-0.200	0.000	0.000	0.000	0.000	0.400
ZINC	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.640
RADIO. GROSS ALPHA	0.000	0.000	0.000	6.900	0.000	0.000	0.000	0.000	0.000
RADIO. GROSS BETA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HARDNESS, TOTAL	0.000	550.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PH	0.000	8.000	7.600	7.400	7.300	7.600	0.000	7.500	0.000
CONDUCTANCE, SPEC.	0.000	1650.000	1600.000	1800.000	0.000	1500.000	0.000	1500.000	0.000
SOLIDS, TOT. DISS.	0.000	0.000	0.000	1180.000	0.000	0.000	0.000	0.000	1150.000
MANGANESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ALKALINITY	410.000	470.000	475.000	490.000	460.000	473.000	423.000	470.000	465.000
CYANIDE	0.000	0.000	0.000	-0.010	0.000	0.000	0.000	0.000	0.010
BORON	0.000	0.200	0.000	0.100	0.000	0.100	0.210	0.120	0.200
BARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILVER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LITHIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ORG. CARBON, DISS.	0.000	0.000	0.000	9.300	0.000	10.000	0.000	0.000	41.000
NITRITE-N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100
BROMIDE	0.000	0.000	0.000	-0.100	0.000	0.000	0.000	0.000	-0.100
COD	0.000	0.000	0.000	5.000	0.000	0.000	0.000	0.000	1.000
PHENOLS	0.000	0.000	0.000	-0.001	0.000	0.000	0.000	0.000	-0.001
KJELDAHL N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
STRONTIUM	0.000	0.000	0.000	1.900	0.000	0.000	0.000	0.000	1.100
VANADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PHOSPHATE, ORTHO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NITROGEN, AMMONIA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.300
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DBAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, FECAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

*** SPECTROGRAPHIC ANALYSIS ***

ALUMINUM	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000
ANTIMONY	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ARSENIC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BISMUTH	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BORON	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000
CADMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CALCIUM	0.000	0.000	0.000999999.000		0.000	0.000	0.000	0.000	0.000
CERIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CESIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHROMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COBALT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLUMBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COPPER	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000
DYSPROSIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUROPIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GADOLINIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GALLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GERMANIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GOLD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HAFNIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HOLMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
INDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRIDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRON	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000
LANTHANUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LEAD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LITHIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LUTETIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAGNESIUM	0.000	0.000	0.000999999.000		0.000	0.000	0.000	0.000	0.000
MANGANESE	0.000	0.000	0.000	0.100	0.000	0.000	0.000	0.000	0.000
MERCURY	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000
NEODYMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OSMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PALLADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PLATINUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
POTASSIUM	0.000	0.000	0.000	0.100	0.000	0.000	0.000	0.000	0.000
PRASEODYMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RHENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RHODIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RUBIDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RUTHENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SAMARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SCANDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SELENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILICON	0.000	0.000	0.000	2.000	0.000	0.000	0.000	0.000	0.000
SILVER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SODIUM	0.000	0.000	0.000	5.000	0.000	0.000	0.000	0.000	0.000
STRONTIUM	0.000	0.000	0.000	0.100	0.000	0.000	0.000	0.000	0.000
TANTALUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THALLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THORIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THULIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TITANIUM	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000
TUNGSTEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
URANIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VANADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
YTTERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
YTTRIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ZINC	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000
ZIRCONIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

APPENDIX 5-2.2

Alluvial Aquifer Water Quality
Individual Statistical Summaries

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
ALUMINUM	2	0.100	0.400	0.200	2.665	0.000	0.000	0
AMMONIA	1	0.280	0.280	0.280	0.000	0.000	0.000	0
ARSENIC	2	0.010	0.010	0.010	1.000	0.010	0.010	2
BICARBONATE	5	400.000	459.000	431.714	1.055	381.284	487.918	0
CADMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
CALCIUM	7	49.000	123.000	89.785	1.350	56.991	141.448	0
CARBONATE	5	0.100	0.100	0.100	1.000	0.100	0.100	5
CHLORIDE	7	14.000	45.500	22.089	1.401	10.838	45.022	0
CHROMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
COPPER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
FLUORIDE	7	0.100	0.400	0.267	1.584	0.133	0.536	0
HYDROXIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
IRON	3	0.050	0.500	0.212	3.517	0.000	1442.751	2
LEAD	2	0.010	0.010	0.010	1.000	0.010	0.010	1
MAGNESIUM	7	31.000	94.000	53.100	1.408	31.630	89.245	0
MERCURY	2	0.001	0.001	0.001	1.000	0.001	0.001	2
NITRATE	3	4.000	113.000	19.338	5.358	0.000	0.000	0
PHOSPHATE	2	0.100	0.200	0.141	1.633	0.000	0.000	1
POTASSIUM	4	1.000	2.000	1.450	1.356	0.519	4.053	0
SELENIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
SILICON DIOXIDE	7	11.000	24.200	19.649	1.304	13.142	29.379	0
SODIUM	7	61.000	130.000	96.303	1.281	66.187	140.122	0
SULFATE	7	150.000	382.000	285.684	1.393	172.930	471.820	0
SULFIDE	2	0.200	0.200	0.200	1.000	0.200	0.200	1
ZINC	2	0.040	0.500	0.141	5.965	0.000	0.000	0
RADIO. GROSS ALPHA	1	2.500	2.500	2.500	0.000	0.000	0.000	0
RADIO. GROSS BETA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
HARDNESS, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PH	4	7.200	7.800	7.525	0.275	6.596	8.454	0
CONDUCTANCE, SPEC.	4	1140.000	1420.000	1270.984	1.096	932.942	1731.511	0
SOLIDS, TOT. DISS.	2	840.000	924.000	880.999	1.070	12.02364	554.551	0
MANGANESE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ALKALINITY	7	280.000	525.000	361.760	1.209	271.280	482.418	0
CYANIDE	2	0.010	0.010	0.010	1.000	0.010	0.010	2
BORON	3	0.100	0.100	0.100	1.000	0.100	0.100	1
BARIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILVER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NICKEL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
LITHIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ORG. CARBON, DISS.	3	0.900	6.100	2.912	2.736	0.002	3967.429	0
NITRITE N	2	0.010	1.000	0.100	25.955	0.000	0.000	1
BROMIDE	2	0.100	0.100	0.100	1.000	0.100	0.100	2
COD	2	5.000	30.000	12.247	3.550	0.000	0.000	0
PHENOLS	2	0.001	0.001	0.001	1.000	0.001	0.001	2
KJELDAHL N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BERYLLIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MOLYBDENUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
STRONTIUM	2	0.600	1.200	0.849	1.633	0.000	0.000	0
VANADIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHOSPHATE, ORTHO	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITROGEN, AMMONIA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
TEMPERATURE	6	5.000	11.000	8.583	2.108	4.783	12.384	0
MBAS	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, FECAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0

STATION: 05-S8 (*79) 7 samplings

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
ALUMINUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
AMMONIA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ARSENIC	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BICARBONATE	5	384.000	438.000	414.143	1.053	369.874	468.255	0
CADMIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
CALCIUM	7	32.000	93.000	65.797	1.546	34.040	127.181	0
CARBONATE	5	0.100	0.100	0.100	1.000	0.100	0.100	5
CHLORIDE	7	9.000	45.500	17.271	1.677	7.898	37.770	0
CHROMIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COPPER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
FLUORIDE	7	0.100	0.500	0.241	1.661	0.121	0.562	0
HYDROXIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
IRON	1	0.050	0.050	0.050	0.000	0.000	0.000	1
LEAD	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MAGNESIUM	7	29.000	54.000	37.019	1.271	25.739	53.246	0
MERCURY	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITRATE	2	1.000	3.600	1.897	2.474	0.000	0.000	0
PHOSPHATE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
POTASSIUM	2	1.300	2.000	1.612	1.356	0.000	0.000	0
SELENIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILICON DIOXIDE	7	3.400	21.400	14.799	1.938	5.438	40.276	0
SODIUM	7	55.000	380.000	113.051	1.992	43.404	294.456	0
SULFATE	7	61.000	330.000	179.405	1.720	78.988	407.479	0
SULFIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ZINC	0	0.000	0.000	0.000	0.000	0.000	0.000	0
RADIO. GROSS ALPHA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
RADIO. GROSS BETA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
HARDNESS, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PH	6	7.000	7.800	7.250	0.303	6.694	7.806	0
CONDUCTANCE, SPEC.	5	1000.000	1300.000	1103.730	1.145	807.772	1503.124	0
SOLIDS, TOT. DISS.	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MANGANESE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ALKALINITY	7	255.000	655.000	359.143	1.335	231.831	556.384	0
CYANIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BORON	1	0.100	0.100	0.100	0.000	0.000	0.000	1
BARIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILVER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NICKEL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
LITHIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ORG. CARBON, DISS.	1	6.500	6.500	6.500	0.000	0.000	0.000	0
NITRITE N	1	0.010	0.010	0.010	0.000	0.000	0.000	1
BROMIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COD	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHENOLS	0	0.000	0.000	0.000	0.000	0.000	0.000	0
KJELDAHL N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BERYLLIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MOLYBDENUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
STRONTIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
VANADIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHOSPHATE, ORTHO	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITROGEN, AMMONIA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
TEMPERATURE	7	5.000	10.500	8.500	2.309	5.005	11.995	0
MBAS	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, FECAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
ALUMINUM	1	0.100	0.100	0.100	0.000	0.000	0.000	1
AMMONIA	1	0.700	0.700	0.700	0.000	0.000	0.000	0
ARSENIC	1	0.010	0.010	0.010	0.000	0.000	0.000	1
BICARBONATE	4	670.000	892.000	743.024	1.141	476.523	1158.339	0
CADMIUM	1	0.010	0.010	0.010	0.000	0.000	0.000	1
CALCIUM	5	69.000	150.000	106.536	1.378	50.957	222.734	0
CARBONATE	3	0.100	0.100	0.100	1.000	0.100	0.100	3
CHLORIDE	5	16.000	45.000	30.315	1.475	12.382	74.217	0
CHROMIUM	1	0.010	0.010	0.010	0.000	0.000	0.000	1
COPPER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
FLUORIDE	5	0.100	0.400	0.270	1.775	0.072	1.013	0
HYDROXIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
IRON	2	0.050	0.050	0.050	1.000	0.050	0.050	2
LEAD	1	0.020	0.020	0.020	0.000	0.000	0.000	0
MAGNESIUM	5	135.000	200.000	160.147	1.160	113.717	225.535	0
MERCURY	1	0.001	0.001	0.001	0.000	0.000	0.000	1
NITRATE	3	4.100	14.000	7.379	1.851	0.098	555.504	0
PHOSPHATE	1	0.100	0.100	0.100	0.000	0.000	0.000	1
POTASSIUM	4	2.000	3.300	2.843	1.270	1.271	6.360	0
SELENIUM	1	0.010	0.010	0.010	0.000	0.000	0.000	1
SILICON DIOXIDE	5	16.000	38.000	23.274	1.404	10.662	50.806	0
SODIUM	5	190.000	270.000	218.293	1.148	158.824	300.001	0
SULFATE	5	432.000	1000.000	698.444	1.400	322.033	1514.826	0
SULFIDE	1	0.200	0.200	0.200	0.000	0.000	0.000	1
ZINC	1	0.700	0.700	0.700	0.000	0.000	0.000	0
RADIO. GROSS ALPHA	1	12.000	12.000	12.000	0.000	0.000	0.000	0
RADIO. GROSS BETA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
HARDNESS, TOTAL	1	900.000	900.000	900.001	0.000	0.000	0.000	0
PH	4	7.200	7.800	7.500	0.258	6.629	8.371	0
CONDUCTANCE, SPEC.	3	2350.000	2800.000	2508.874	1.166	1282.038	4909.728	0
SOLIDS, TOT. DISS.	1	1730.000	1730.000	1730.000	0.000	0.000	0.000	0
MANGANESE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ALKALINITY	5	550.000	730.000	602.676	1.122	462.304	785.670	0
CYANIDE	1	0.010	0.010	0.010	0.000	0.000	0.000	1
BORON	3	0.200	0.300	0.229	1.264	0.044	1.184	0
BARIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILVER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NICKEL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
LITHIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ORG. CARBON, DISS.	2	11.000	12.000	11.489	1.043	0.229	577.202	0
NITRITE N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BROMIDE	1	0.100	0.100	0.100	0.000	0.000	0.000	1
COD	1	15.000	15.000	15.000	0.000	0.000	0.000	0
PHENOLS	1	0.001	0.001	0.001	0.000	0.000	0.000	0
KJELDAHL N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BERYLLIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MOLYBDENUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
STRONTIUM	1	3.500	3.500	3.500	0.000	0.000	0.000	0
VANADIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHOSPHATE, ORTHO	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITROGEN, AMMONIA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
TEMPERATURE	5	6.000	11.000	9.000	1.204	4.617	13.383	0
MBAS	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, FECAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0

STATION: GS-S11D (79) 6 samplings

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
ALUMINUM	2	0.100	0.100	0.100	1.000	0.100	0.100	1
AMMONIA	2	0.300	0.420	0.355	1.263	0.000	0.000	1
ARSENIC	2	0.010	0.010	0.010	1.000	0.010	0.010	2
BICARBONATE	5	580.000	620.000	600.261	1.024	567.848	634.574	0
CADMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
CALCIUM	6	115.000	248.000	167.253	1.434	87.300	320.429	0
CARBONATE	4	0.100	0.100	0.100	1.000	0.100	0.100	4
CHLORIDE	6	21.000	34.000	26.286	1.203	18.839	36.678	0
CHROMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
COPPER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
FLUORIDE	5	0.100	0.400	0.234	1.707	0.048	0.800	1
HYDROXIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
IRON	3	0.050	0.230	0.083	2.413	0.000	40.299	2
LEAD	2	0.010	0.030	0.017	2.175	0.000	0.000	1
MAGNESIUM	6	110.000	206.000	136.051	1.268	88.453	203.789	0
MERCURY	2	0.001	0.001	0.001	1.000	0.001	0.001	2
NITRATE	3	5.500	12.000	8.988	1.533	0.447	180.594	0
PHOSPHATE	2	0.100	0.100	0.100	1.000	0.100	0.100	2
POTASSIUM	5	3.000	14.000	5.573	1.944	1.206	25.746	0
SELENIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
SILICON DIOXIDE	6	20.000	28.000	24.187	1.129	19.424	30.117	0
SODIUM	6	190.000	330.000	248.767	1.232	170.784	362.359	0
SULFATE	6	650.000	1590.000	932.936	1.428	491.040	1772.502	0
SULFIDE	1	0.200	0.200	0.200	0.000	0.000	0.000	1
ZINC	2	0.640	0.700	0.669	1.045	0.012	37.794	0
RADIO. GROSS ALPHA	1	25.000	25.000	25.000	0.000	0.000	0.000	0
RADIO. GROSS BETA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
HARDNESS, TOTAL	1	760.000	760.000	760.000	0.000	0.000	0.000	0
PH	3	7.600	7.800	7.700	0.100	6.998	8.402	0
CONDUCTANCE, SPEC.	3	1900.000	3125.000	2300.310	1.307	350.440	15090.756	0
SOLIDS, TOT. DISS.	2	1550.000	2500.000	1968.503	1.402	0.000	0.000	0
MANGANESE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ALKALINITY	6	475.000	600.000	509.803	1.097	439.710	592.416	0
CYANIDE	1	0.010	0.010	0.010	0.000	0.000	0.000	1
BORON	4	0.100	0.300	0.157	1.721	0.025	0.977	0
BARIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILVER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NICKEL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
LITHIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ORG. CARBON, DISS.	3	4.900	28.000	14.517	2.475	0.023	7808.662	0
NITRITE-N	1	3.000	3.000	3.000	0.000	0.000	0.000	0
BROMIDE	2	0.100	0.100	0.100	1.000	0.100	0.100	1
COD	2	1.000	5.000	2.236	3.121	0.000	0.000	0
PHENOLS	1	0.001	0.001	0.001	0.000	0.000	0.000	1
KJELDAHL N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BERYLLIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MOLYBDENUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
STRONTIUM	2	1.400	2.300	1.794	1.421	0.000	0.000	0
VANADIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHOSPHATE, ORTHO	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITROGEN, AMMONIA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
TEMPERATURE	5	6.000	10.500	9.100	1.782	4.398	13.202	0
MBAS	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, FECAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0

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Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
ALUMINUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
AMMONIA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ARSENIC	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BICARBONATE	1	540.000	540.000	540.000	0.000	0.000	0.000	0
CADMIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
CALCIUM	1	98.000	98.000	98.000	0.000	0.000	0.000	0
CARBONATE	1	0.100	0.100	0.100	0.000	0.000	0.000	1
CHLORIDE	1	14.000	14.000	14.000	0.000	0.000	0.000	0
CHROMIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COPPER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
FLUORIDE	1	0.100	0.100	0.100	0.000	0.000	0.000	0
HYDROXIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
IRON	1	0.050	0.050	0.050	0.000	0.000	0.000	1
LEAD	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MAGNESIUM	1	184.000	184.000	184.000	0.000	0.000	0.000	0
MERCURY	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITRATE	1	2.200	2.200	2.200	0.000	0.000	0.000	0
PHOSPHATE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
POTASSIUM	1	4.500	4.500	4.500	0.000	0.000	0.000	0
SELENIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILICON DIOXIDE	1	27.000	27.000	27.000	0.000	0.000	0.000	0
SODIUM	1	190.000	190.000	190.000	0.000	0.000	0.000	0
SULFATE	1	961.000	961.000	961.000	0.000	0.000	0.000	0
SULFIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ZINC	0	0.000	0.000	0.000	0.000	0.000	0.000	0
RADIO. GROSS ALPHA	1	7.500	7.500	7.500	0.000	0.000	0.000	0
RADIO. GROSS BETA	1	37.000	37.000	37.000	0.000	0.000	0.000	0
HARDNESS. TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PH	2	7.300	7.500	7.400	0.141	-1.602	14.402	0
CONDUCTANCE. SPEC.	2	2400.000	2700.000	2545.535	1.087	0.000	0.000	0
SOLIDS. TOT. DISS.	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MANGANESE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ALKALINITY	1	442.000	442.000	442.000	0.000	0.000	0.000	0
CYANIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BORON	1	0.100	0.100	0.100	0.000	0.000	0.000	0
BARIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILVER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NICKEL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
LITHIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ORG. CARBON. DISS.	1	9.500	9.500	9.500	0.000	0.000	0.000	0
NITRITE-N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BROMIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COD	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHENOLS	0	0.000	0.000	0.000	0.000	0.000	0.000	0
KJELDAHL N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BERYLLIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MOLYBDENUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
STRONTIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
VANADIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHOSPHATE. ORTHO	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITROGEN. AMMONIA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
TEMPERATURE	2	9.500	10.000	9.750	0.354	-12.756	32.256	0
MBAS	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM. TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM. FECAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0

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STATION: GS-S27 ('79) 9 samplings

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
ALUMINUM	2	0.100	0.100	0.100	1.000	0.100	0.100	1
AMMONIA	2	0.300	0.420	0.355	1.269	0.000	0.000	1
ARSENIC	2	0.010	0.010	0.010	1.000	0.010	0.010	2
BICARBONATE	7	512.000	600.000	564.869	1.050	524.833	607.959	0
CADMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
CALCIUM	9	41.000	120.000	95.074	1.392	44.249	140.439	0
CARBONATE	5	0.100	15.600	0.275	9.567	0.002	49.707	4
CHLORIDE	9	10.000	17.000	13.050	1.268	9.848	17.293	0
CHROMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
COPPER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
FLUORIDE	8	0.100	0.500	0.252	1.608	0.134	0.472	0
HYDROXIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
IRON	4	0.030	0.120	0.061	2.204	0.004	0.883	2
LEAD	2	0.010	0.020	0.014	1.633	0.000	0.000	1
MAGNESIUM	9	55.000	94.000	77.889	1.169	64.745	93.701	0
MERCURY	2	0.001	0.001	0.001	1.000	0.001	0.001	2
NITRATE	5	0.037	1.800	0.264	6.094	0.004	16.911	0
FLUORIDATE	2	0.100	0.100	0.100	1.000	0.100	0.100	2
POTASSIUM	7	2.300	9.000	3.731	1.593	1.845	7.548	0
SELENIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
SILICON DIOXIDE	9	2.900	23.000	15.872	1.926	7.296	34.529	0
SODIUM	9	122.000	200.000	147.418	1.134	120.686	180.071	0
SULFATE	9	285.000	520.000	409.667	1.214	324.678	514.381	0
SULFIDE	2	0.200	0.400	0.283	1.633	0.000	0.000	1
ZINC	2	0.500	0.640	0.566	1.191	0.000	37874.133	0
RADIO. GROSS ALPHA	1	6.900	6.900	6.900	0.000	0.000	0.000	0
RADIO. GROSS BETA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
HARDNESS, TOTAL	1	550.000	550.000	550.000	0.000	0.000	0.000	0
PH	6	7.300	8.000	7.567	0.242	7.130	8.003	0
CONDUCTANCE, SPEC.	5	1500.000	1800.000	1606.245	1.079	1348.481	1912.999	0
SOLIDS, TOT. DISS.	2	1150.000	1180.000	1164.904	1.018	364.132	3726.674	0
MANGANESE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ALKALINITY	9	416.000	490.000	458.879	1.040	428.311	491.629	0
CYANIDE	2	0.010	0.010	0.010	1.000	0.010	0.010	2
BORON	6	0.100	0.210	0.147	1.436	0.077	0.283	0
BARIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILVER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NICKEL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
LITHIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ORG. CARBON, DISS.	3	9.300	41.000	15.623	2.303	0.044	5532.536	0
NITRITE-N	1	0.100	0.100	0.100	0.000	0.000	0.000	0
BROMIDE	2	0.100	0.100	0.100	1.000	0.100	0.100	2
COD	2	1.000	5.000	2.236	3.121	0.000	0.000	0
PHENOLS	2	0.001	0.001	0.001	1.000	0.001	0.001	2
KJELDAHL N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BERYLLIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MOLYBDENUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
STRONTIUM	2	1.100	1.800	1.407	1.417	0.000	0.000	0
VANADIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHOSPHATE, ORTHO	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITROGEN, AMMONIA	1	0.300	0.300	0.300	0.000	0.000	0.000	1
TEMPERATURE	7	7.000	11.000	8.700	1.471	6.474	10.926	0
NBAS	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, FECAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0

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APPENDIX 5-2.3

Alluvial Aquifer Water Quality
Combined Statistical Summaries

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
ALUMINUM	7	0.100	0.400	0.122	1.689	0.055	0.269	3
AMMONIA	6	0.230	0.700	0.382	1.413	0.205	0.713	2
ARSENIC	7	0.010	0.010	0.010	1.000	0.010	0.010	7
BICARBONATE	27	384.000	892.000	534.020	1.235	476.084	599.006	0
CADMIUM	7	0.010	0.010	0.010	1.000	0.010	0.010	7
CALCIUM	35	32.000	248.000	97.861	1.550	79.692	120.173	0
CARBONATE	23	0.100	15.600	0.125	2.868	0.066	0.235	22
CHLORIDE	35	9.000	45.500	19.542	1.596	15.696	24.330	0
CHROMIUM	7	0.010	0.010	0.010	1.000	0.010	0.010	7
COPPER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
FLUORIDE	33	0.100	0.500	0.250	1.638	0.196	0.317	1
HYDROXIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
IRON	14	0.030	0.500	0.081	2.467	0.038	0.171	10
LEAD	7	0.010	0.030	0.014	1.589	0.007	0.029	3
MAGNESIUM	35	29.000	206.000	77.738	1.798	59.053	102.335	0
MERCURY	7	0.001	0.001	0.001	1.000	0.001	0.001	7
NITRATE	17	0.037	113.000	2.699	7.737	0.606	12.024	0
PHOSPHATE	7	0.100	0.200	0.110	1.300	0.074	0.164	6
POTASSIUM	23	1.000	14.000	3.088	1.889	2.107	4.526	0
SELENIUM	7	0.010	0.010	0.010	1.000	0.010	0.010	7
SILICON DIOXIDE	35	2.900	38.000	18.828	1.645	14.910	23.774	0
SODIUM	35	55.000	380.000	149.613	1.601	120.025	186.496	0
SULFATE	35	61.000	1590.000	411.227	1.973	299.092	565.401	0
SULFIDE	6	0.200	0.400	0.224	1.327	0.135	0.374	4
ZINC	7	0.040	0.700	0.412	2.823	0.086	1.981	0
RADIO, GROSS ALPHA	5	2.500	25.000	8.276	2.321	1.191	57.490	0
RADIO, GROSS BETA	1	37.000	37.000	37.000	0.000	0.000	0.000	0
HARDNESS, TOTAL	3	550.000	900.000	721.894	1.284	124.686	4179.544	0
PH	25	7.000	8.000	7.476	0.271	7.321	7.631	0
CONDUCTANCE, SPEC.	22	1000.000	3125.000	1644.940	1.423	1323.063	2045.124	0
SOLIDS, TOT. DISS.	7	840.000	2500.000	1322.100	1.473	743.022	2352.488	0
MANGANESE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ALKALINITY	35	255.000	730.000	440.595	1.277	392.920	494.054	0
CYANIDE	6	0.010	0.010	0.010	1.000	0.010	0.010	6
BORON	18	0.100	0.300	0.144	1.521	0.107	0.194	2
BARIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILVER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NICKEL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
LITHIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ORG. CARBON, DISS.	13	0.900	41.000	8.799	2.561	3.940	20.164	0
NITRITE N	5	0.010	3.000	0.125	13.589	0.000	50.582	2
BROMIDE	7	0.100	0.100	0.100	1.000	0.100	0.100	6
COD	7	1.000	30.000	4.771	3.539	0.705	32.299	0
PHENOLS	5	0.001	0.001	0.001	1.000	0.001	0.001	5
KJELDAHL N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BERYLLIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MOLYBDENUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
STRONTIUM	7	0.600	3.500	1.487	1.762	0.631	3.503	0
VANADIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHOSPHATE, ORTHO	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITROGEN, AMMONIA	1	0.300	0.300	0.300	0.000	0.000	0.000	1
TEMPERATURE	32	5.000	11.000	8.803	1.773	7.933	9.696	0
MBAS	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, FECAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0

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APPENDIX 5-2.4

Alluvial Aquifer Water Quality
Comparison of Baseline and Report Period
Individual Statistical Analysis

*** Statistical Tests ***

Data Set 1: GS-S7 ('79)
Data Set 2: Baseline Alluvial Aquifers

		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
ALKALINITY	1:	7	361.760	1.209	t...	0.768	1.996	A
	2:	67	383.000	1.170	F...	1.461	2.496	A
					t'..	2.421		A
ALUMINUM	1:	2	0.200	2.665	t...	0.469	2.201	A
	2:	11	0.142	2.140	F...	1.460	5.260	A
					t'..	12.111		A
AMMONIA	1:	1	0.280	0.000				
	2:	49	0.360	2.490				
ARSENIC	1:	2	0.010	1.000	t...	1.560	2.007	A
	2:	53	0.011	1.560	F...	0.000	5.260	r
					t'..	2.008		A
BARIUM	1:	0	0.000	0.000				
	2:	45	1.000	1.000				
BERYLLIUM	1:	0	0.000	0.000				
	2:	3	0.106	5.480				
BICARBONATE	1:	5	431.714	1.055	t...	1.894	1.997	A
	2:	67	458.700	1.190	F...	10.556	6.114	r
					t'..	2.472		A
BORON	1:	3	0.100	1.000	t...	2.675	1.998	r
	2:	65	0.190	6.920	F...	0.000	6.114	r
					t'..	1.999		r
BROMIDE	1:	2	0.100	1.000	t...	0.811	2.306	A
	2:	8	0.150	4.110	F...	0.000	6.114	r
					t'..	2.365		A
CADMIUM	1:	2	0.010	1.000	t...	4.808	2.006	r
	2:	54	0.017	2.250	F...	0.000	6.114	r
					t'..	2.007		r
CALCIUM	1:	7	89.785	1.350	t...	0.592	1.996	A
	2:	67	96.400	1.380	F...	1.152	4.244	A
					t'..	2.404		A
CARBONATE	1:	5	0.100	1.000	t...	3.711	1.997	r
	2:	67	0.240	8.230	F...	0.000	4.244	r
					t'..	1.998		r
CHLORIDE	1:	7	22.089	1.401	t...	2.865	1.997	r
	2:	65	17.900	1.730	F...	1.356	4.244	A
					t'..	2.336		r
CHROMIUM	1:	2	0.010	1.000	t...	1.622	2.006	A
	2:	54	0.011	1.540	F...	0.000	4.244	r

					t...	2.007		A
COD	1:	2	12.247	3.550	t...	0.315	2.201	A
	2:	11	16.400	2.180	F...	2.643	5.260	A
					t'..	12.324		A
COLIFORM, FECAL	1:	0	0.000	0.000				
	2:	2	20.000	2.470				
COLIFORM, TOTAL	1:	0	0.000	0.000				
	2:	2	71.000	5.970				
CONDUCTANCE, SPEC.	1:	4	1270.984	1.096	t...	0.233	1.997	A
	2:	67	1288.000	1.320	F...	9.173	8.354	r
					t'..	2.834		A
COPPER	1:	0	0.000	0.000				
	2:	56	0.012	1.330				
CYANIDE	1:	2	0.010	1.000	t...	0.000	2.005	X
	2:	55	0.010	1.000	F...	0.000	0.000	E
					t'..	0.000		X
FLUORIDE	1:	7	0.267	1.584	t...	0.142	1.996	A
	2:	66	0.260	1.730	F...	1.420	4.245	A
					t'..	2.395		A
HARDNESS, TOTAL	1:	0	0.000	0.000				
	2:	62	447.700	1.380				
HYDROXIDE	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
IRON	1:	3	0.212	3.517	t...	2.019	1.997	r
	2:	67	1.029	10.850	F...	3.594	13.985	A
					t'..	4.077		A
KJELDAHL N	1:	0	0.000	0.000				
	2:	22	1.780	3.100				
LEAD	1:	2	0.010	1.000	t...	15.860	2.004	r
	2:	56	0.130	3.450	F...	0.000	13.985	r
					t'..	2.005		r
LITHIUM	1:	0	0.000	0.000				
	2:	11	0.100	1.010				
MAGNESIUM	1:	7	33.180	1.403	t...	0.474	1.997	A
	2:	65	57.040	1.780	F...	2.840	4.246	A
					t'..	2.353		A
MANGANESE	1:	0	0.000	0.000				
	2:	64	0.575	6.980				
MBAS	1:	0	0.000	0.000				
	2:	2	0.010	1.000				
MERCURY	1:	2	0.001	1.000	t...	8.308	2.004	r
	2:	58	0.003	3.690	F...	0.000	4.246	r
					t'..	2.005		r
MOLYBDENUM	1:	0	0.000	0.000				
	2:	6	0.100	1.000				
NICKEL	1:	0	0.000	0.000				
	2:	45	0.054	2.270				

					t'..	4.286		A
NITRITE-N	1:	2	0.100	25.955	t...	0.331	2.093	A
	2:	19	0.220	14.740	F...	1.465	4.510	A
					t'..	12.318		A
NITROGEN, AMMONIA	1:	0	0.000	0.000				
	2:	14	0.360	3.610				
ORG. CARBON, DISS.	1:	3	2.912	2.796	t...	3.016	2.004	r
	2:	55	18.700	3.440	F...	1.444	14.003	A
					t'..	4.186		A
PH	1:	4	7.525	0.275	t...	8.367	1.998	r
	2:	63	6.320	0.340	F...	1.529	8.357	A
					t'..	3.101		r
PHENOLS	1:	2	0.001	1.000	t...	2.020	2.201	A
	2:	11	0.002	3.120	F...	0.000	8.357	r
					t'..	2.228		A
PHOSPHATE	1:	2	0.141	1.633	t...	0.991	2.086	A
	2:	20	0.100	1.000	F...	0.000	8.357	r
					t'..	12.706		A
PHOSPHATE, ORTHO	1:	0	0.000	0.000				
	2:	65	0.100	1.410				
POTASSIUM	1:	4	1.450	1.356	t...	4.379	2.064	r
	2:	22	3.660	1.990	F...	5.106	8.535	A
					t'..	2.717		r
RADIO.a GROSS ALPHA	1:	1	2.500	0.000				
	2:	45	7.340	2.470				
RADIO.b RADIUM	1:	0	0.000	0.000				
	2:	27	0.260	2.140				
RADIO.c GROSS BETA	1:	0	0.000	0.000				
	2:	13	9.500	2.540				
SELENIUM	1:	2	0.010	1.000	t...	0.000	2.004	A
	2:	56	0.010	1.360	F...	0.000	8.535	r
					t'..	2.005		A
SILICON DIOXIDE	1:	7	19.643	1.304	t...	3.871	1.996	r
	2:	67	29.200	1.180	F...	2.572	2.496	r
					t'..	2.432		r
SILVER	1:	0	0.000	0.000				
	2:	45	0.013	1.780				
SODIUM	1:	7	94.303	1.281	t...	4.147	1.996	r
	2:	67	151.100	1.570	F...	3.318	4.244	A
					t'..	2.343		r
SOLIDS, TOT. DISS.	1:	2	830.999	1.070	t...	2.473	1.998	r
	2:	67	777.000	1.150	F...	4.267	39.431	A
					t'..	12.056		A
STRONTIUM	1:	2	0.843	1.633	t...	2.754	2.447	r
	2:	6	2.495	1.560	F...	1.216	7.260	A
					t'..	11.275		A

SULFATE	1:	7	285.684	1.393	t...	0.267	1.996	A
	2:	67	297.000	1.840	F...	3.384	4.244	A
					t'..	2.341		A
SULFIDE	1:	2	0.200	1.000	t...	0.787	2.201	A
	2:	11	0.160	2.560	F...	0.000	4.244	r
					t'..	2.228		A
TEMPERATURE	1:	6	8.583	2.108	t...	0.849	1.996	A
	2:	67	9.333	1.617	F...	1.700	2.617	A
					t'..	2.547		A
VANADIUM	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
ZINC	1:	2	0.141	5.965	t...	0.571	2.005	A
	2:	55	0.292	3.460	F...	2.070	3.960	A
					t'..	12.611		A

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*** Statistical Tests ***

Data Set 1: OS-S8 ('79)
Data Set 2: Baseline Alluvial Aquifers

		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
ALKALINITY	1:	7	359.148	1.335	t...	0.580	1.996	A
	2:	67	393.000	1.170	F...	3.387	2.496	r
					t'..	2.435		A
ALUMINUM	1:	0	0.000	0.000				
	2:	11	0.142	2.140				
AMMONIA	1:	0	0.000	0.000				
	2:	49	0.360	2.490				
ARSENIC	1:	0	0.000	0.000				
	2:	53	0.011	1.560				
BARIUM	1:	0	0.000	0.000				
	2:	45	1.000	1.000				
BERYLLIUM	1:	0	0.000	0.000				
	2:	3	0.106	5.480				
BICARBONATE	1:	5	416.168	1.053	t...	3.100	1.997	r
	2:	67	458.700	1.190	F...	11.346	6.114	r
					t'..	2.459		r
BORON	1:	1	0.100	0.000				
	2:	65	0.190	6.920				
BROMIDE	1:	0	0.000	0.000				
	2:	8	0.150	4.110				
CADMIUM	1:	0	0.000	0.000				
	2:	54	0.017	2.250				
CALCIUM	1:	7	65.797	1.546	t...	2.256	1.996	r
	2:	67	96.400	1.380	F...	1.830	2.496	A
					t'..	2.426		A
CARBONATE	1:	5	0.100	1.000	t...	3.711	1.997	r
	2:	67	0.240	8.230	F...	0.000	2.496	r
					t'..	1.998		r
CHLORIDE	1:	7	17.271	1.677	t...	1.443	1.997	A
	2:	65	12.800	1.730	F...	1.124	4.246	A
					t'..	2.404		A
CHROMIUM	1:	0	0.000	0.000				
	2:	54	0.011	1.540				
COD	1:	0	0.000	0.000				
	2:	11	16.400	2.180				
COLIFORM, FECAL	1:	0	0.000	0.000				

	2:	2	20.000	2.670				
COLIFORM, TOTAL	1:	0	0.000	0.000				
	2:	2	71.000	5.970				
CONDUCTANCE, SPEC.	1:	5	1103.730	1.145	t...	2.224	1.997	r
	2:	47	1289.000	1.320	F...	4.204	4.114	A
					t'..	2.618		A
COPPER	1:	0	0.000	0.000				
	2:	54	0.012	1.330				
CYANIDE	1:	0	0.000	0.000				
	2:	55	0.010	1.000				
FLUORIDE	1:	7	0.261	1.661	t...	0.012	1.996	A
	2:	66	0.240	1.730	F...	1.167	4.245	A
					t'..	2.403		A
HARDNESS, TOTAL	1:	0	0.000	0.000				
	2:	62	447.700	1.380				
HYDROXIDE	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
IRON	1:	1	0.050	0.000				
	2:	47	1.029	10.850				
KJELDAHL N	1:	0	0.000	0.000				
	2:	22	1.780	3.100				
LEAD	1:	0	0.000	0.000				
	2:	56	0.138	3.450				
LITHIUM	1:	0	0.000	0.000				
	2:	11	0.100	1.010				
MAGNESIUM	1:	7	37.019	1.271	t...	3.744	1.997	r
	2:	65	57.040	1.780	F...	5.782	4.246	r
					t'..	2.289		r
MANGANESE	1:	0	0.000	0.000				
	2:	64	0.575	6.980				
MBAS	1:	0	0.000	0.000				
	2:	2	0.010	1.000				
MERCURY	1:	0	0.000	0.000				
	2:	56	0.003	2.690				
MOLYBDENUM	1:	0	0.000	0.000				
	2:	6	0.100	1.000				
NICKEL	1:	0	0.000	0.000				
	2:	45	0.054	2.270				
NITRATE	1:	2	1.897	2.474	t...	1.111	2.000	A
	2:	61	3.900	2.210	F...	1.305	3.928	A
					t'..	12.571		A
NITRITE N	1:	1	0.010	0.000				
	2:	19	0.220	14.740				
NITROGEN, AMMONIA	1:	0	0.000	0.000				
	2:	14	0.360	3.610				

PH	1:	6	7.250	0.308	t...	7.001	1.998	r
	2:	63	6.320	0.340	F...	1.219	4.957	A
					t'..	2.520		r
PHENOLS	1:	0	0.000	0.000				
	2:	11	0.002	3.120				
PHOSPHATE	1:	0	0.000	0.000				
	2:	20	0.100	1.000				
PHOSPHATE, ORTHO	1:	0	0.000	0.000				
	2:	65	0.100	1.410				
POTASSIUM	1:	2	1.612	1.356	t...	3.147	2.074	r
	2:	22	3.660	1.990	F...	5.106	39.455	A
					t'..	10.628		A
RADIO.a GROSS ALPHA	1:	0	0.000	0.000				
	2:	45	7.340	2.470				
RADIO.b RADIUM	1:	0	0.000	0.000				
	2:	27	0.260	2.140				
RADIO.c GROSS BETA	1:	0	0.000	0.000				
	2:	13	9.500	2.540				
SELENIUM	1:	0	0.000	0.000				
	2:	56	0.010	1.360				
SILICON DIOXIDE	1:	7	14.799	1.938	t...	2.709	1.996	r
	2:	67	29.200	1.180	F...	15.981	2.496	r
					t'..	2.444		r
SILVER	1:	0	0.000	0.000				
	2:	45	0.013	1.780				
SODIUM	1:	7	113.051	1.882	t...	1.183	1.996	A
	2:	67	151.100	1.570	F...	1.965	2.496	A
					t'..	2.427		A
SOLIDS, TOT. DISS.	1:	0	0.000	0.000				
	2:	67	777.000	1.150				
STRONTIUM	1:	0	0.000	0.000				
	2:	6	2.495	1.560				
SULFATE	1:	7	179.405	1.720	t...	2.311	1.996	r
	2:	67	297.000	1.840	F...	1.264	4.244	A
					t'..	2.401		A
SULFIDE	1:	0	0.000	0.000				
	2:	11	0.160	2.560				
TEMPERATURE	1:	7	8.500	2.309	t...	0.931	1.996	A
	2:	67	9.333	1.617	F...	2.039	2.496	A
					t'..	2.428		A
VANADIUM	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
ZINC	1:	0	0.000	0.000				
	2:	55	0.292	3.460				

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*** Statistical Tests ***

Data Set 1: GS-SIIAD ('79)
Data Set 2: Baseline Alluvial Aquifers

		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
ALKALINITY	1:	5	602.676	1.122	t...	8.252	1.997	r
	2:	67	383.000	1.170	F...	1.860	6.114	A
					t'..	2.697		r
ALUMINUM	1:	1	0.100	0.000				
	2:	11	0.142	2.140				
AMMONIA	1:	1	0.700	0.000				
	2:	49	0.360	2.490				
ARSENIC	1:	1	0.010	0.000				
	2:	53	0.011	1.560				
BARIUM	1:	0	0.000	0.000				
	2:	45	1.000	1.000				
BERYLLIUM	1:	0	0.000	0.000				
	2:	3	0.106	5.480				
BICARBONATE	1:	4	743.024	1.141	t...	6.961	1.997	r
	2:	67	458.700	1.190	F...	1.739	8.354	A
					t'..	3.095		r
BORON	1:	3	0.229	1.264	t...	0.678	1.998	A
	2:	65	0.190	6.920	F...	68.175	13.987	r
					t'..	2.735		A
BROMIDE	1:	1	0.100	0.000				
	2:	8	0.150	4.110				
CADMIUM	1:	1	0.010	0.000				
	2:	54	0.017	2.250				
CALCIUM	1:	5	106.536	1.373	t...	0.672	1.997	A
	2:	67	96.400	1.380	F...	1.009	6.114	A
					t'..	2.731		A
CARBONATE	1:	3	0.100	1.000	t...	3.711	1.997	r
	2:	67	0.260	3.230	F...	0.000	6.114	r
					t'..	1.998		r
CHLORIDE	1:	5	30.315	1.475	t...	4.620	1.997	r
	2:	65	12.800	1.730	F...	1.989	6.116	A
					t'..	2.690		r
CHROMIUM	1:	1	0.010	0.000				
	2:	54	0.011	1.540				
COD	1:	1	15.000	0.000				
	2:	11	16.400	2.180				

COLIFORM, TOTAL	1:	0	0.000	0.000				
	2:	2	71.000	5.970				
CONDUCTANCE, SPEC.	1:	3	2508.876	1.100	t...	10.315	1.997	P
	2:	67	1288.000	1.320	F...	8.495	13.985	A
					t'..	3.832		P
COPPER	1:	0	0.000	0.000				
	2:	56	0.012	1.330				
CYANIDE	1:	1	0.010	0.000				
	2:	55	0.010	1.000				
FLUORIDE	1:	5	0.270	1.775	t...	0.142	1.997	A
	2:	66	0.260	1.730	F...	1.096	2.778	A
					t'..	2.735		A
HARDNESS, TOTAL	1:	1	900.001	0.000				
	2:	62	447.700	1.380				
HYDROXIDE	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
IRON	1:	2	0.050	1.000	t...	10.383	1.998	P
	2:	67	1.029	10.850	F...	0.000	2.778	P
					t'..	1.998		P
KJELDAHL N	1:	0	0.000	0.000				
	2:	22	1.780	3.100				
LEAD	1:	1	0.020	0.000				
	2:	56	0.138	3.450				
LITHIUM	1:	0	0.000	0.000				
	2:	11	0.100	1.010				
MAGNESIUM	1:	5	160.147	1.160	t...	10.580	1.997	P
	2:	65	57.040	1.780	F...	15.093	6.116	P
					t'..	2.399		P
MANGANESE	1:	0	0.000	0.000				
	2:	64	0.575	4.980				
MBAS	1:	0	0.000	0.000				
	2:	2	0.010	1.000				
MERCURY	1:	1	0.001	0.000				
	2:	56	0.003	2.690				
MOLYBDENUM	1:	0	0.000	0.000				
	2:	8	0.100	1.000				
NICKEL	1:	0	0.000	0.000				
	2:	45	0.054	2.270				
NITRATE	1:	3	7.379	1.851	t...	1.725	1.999	A
	2:	61	3.900	2.210	F...	1.659	13.989	A
					t'..	4.182		A
NITRITE-N	1:	0	0.000	0.000				
	2:	13	0.220	14.740				
NITROGEN, AMMONIA	1:	0	0.000	0.000				

	2:	14	0.360	3.610				
ORG. CARBON, DISS.	1:	2	11.489	1.063	t...	2.831	2.005	r
	2:	55	18.700	3.440	F...	408.934	39.477	r
					t'..	3.254		A
PH	1:	4	7.500	0.258	t...	8.681	1.998	r
	2:	63	6.320	0.340	F...	1.737	8.357	A
					t'..	3.090		r
PHENOLS	1:	1	0.001	0.000				
	2:	11	0.002	3.120				
PHOSPHATE	1:	1	0.100	0.000				
	2:	20	0.100	1.000				
PHOSPHATE, ORTHO	1:	0	0.000	0.000				
	2:	65	0.100	1.410				
POTASSIUM	1:	4	2.843	1.270	t...	1.335	2.064	A
	2:	22	3.660	1.320	F...	8.282	8.535	A
					t'..	2.585		A
RADIO.a GROSS ALPHA	1:	1	12.000	0.000				
	2:	45	7.340	2.470				
RADIO.b RADIUM	1:	0	0.000	0.000				
	2:	27	0.260	2.140				
RADIO.c GROSS BETA	1:	0	0.000	0.000				
	2:	13	9.500	2.540				
SELENIUM	1:	1	0.010	0.000				
	2:	56	0.010	1.360				
SILICON DIOXIDE	1:	5	23.274	1.404	t...	1.482	1.997	A
	2:	67	29.200	1.130	F...	4.203	2.776	r
					t'..	2.765		A
SILVER	1:	0	0.000	0.000				
	2:	45	0.013	1.780				
SODIUM	1:	5	218.283	1.148	t...	4.446	1.997	r
	2:	67	151.100	1.570	F...	10.681	6.114	r
					t'..	2.470		r
SOLIDS, TOT. DISS.	1:	1	1730.000	0.000				
	2:	67	777.000	1.150				
STRONTIUM	1:	1	3.500	0.000				
	2:	6	2.495	1.540				
SULFATE	1:	5	698.444	1.400	t...	5.033	1.997	r
	2:	67	297.000	1.840	F...	3.284	6.114	A
					t'..	2.447		r
SULFIDE	1:	1	0.200	0.000				
	2:	11	0.160	2.560				
TEMPERATURE	1:	5	9.000	1.304	t...	0.381	1.997	A
	2:	67	9.333	1.617	F...	1.386	2.776	A
					t'..	2.743		A
VANADIUM	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
ZINC	1:	1	0.700	0.000				
	2:	55	0.292	3.460				

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*** Statistical Tests ***

Data Set 1: OS-S11D ('79)
Data Set 2: Baseline Alluvial Aquifers

		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
ALKALINITY	1:	6	509.803	1.087	t...	7.317	1.996	r
	2:	67	383.000	1.170	F...	3.542	4.953	A
					t'..	2.450		r
ALUMINUM	1:	2	0.100	1.000	t...	1.529	2.201	A
	2:	11	0.142	2.140	F...	0.000	4.953	r
					t'..	2.223		A
AMMONIA	1:	2	0.355	1.269	t...	0.066	2.012	A
	2:	49	0.360	2.490	F...	14.665	39.474	A
					t'..	10.204		A
ARSENIC	1:	2	0.010	1.000	t...	1.560	2.007	A
	2:	53	0.011	1.560	F...	0.000	39.474	r
					t'..	2.008		A
BARIUM	1:	0	0.000	0.000				
	2:	45	1.000	1.000				
BERYLLIUM	1:	0	0.000	0.000				
	2:	3	0.106	5.480				
BICARBONATE	1:	5	600.261	1.024	t...	11.324	1.997	r
	2:	67	458.700	1.190	F...	53.737	6.114	r
					t'..	2.181		r
BORON	1:	4	0.157	1.721	t...	0.527	1.998	A
	2:	65	0.190	6.920	F...	12.696	8.356	r
					t'..	2.741		A
BROMIDE	1:	2	0.100	1.000	t...	0.811	2.306	A
	2:	8	0.150	4.110	F...	0.000	8.356	r
					t'..	2.365		A
CADMIUM	1:	2	0.010	1.000	t...	4.803	2.006	r
	2:	54	0.017	2.250	F...	0.000	8.356	r
					t'..	2.007		r
CALCIUM	1:	6	167.253	1.434	t...	3.617	1.996	r
	2:	67	96.400	1.380	F...	1.253	2.417	A
					t'..	2.538		r
CARBONATE	1:	4	0.100	1.000	t...	3.711	1.997	r
	2:	67	0.260	9.230	F...	0.000	2.417	r
					t'..	1.998		r
CHLORIDE	1:	6	26.286	1.203	t...	7.095	1.997	r
	2:	65	12.800	1.730	F...	8.794	4.956	r
					t'..	2.338		r
CHROMIUM	1:	2	0.010	1.000	t...	1.622	2.006	A

		2:	54	0.011	1.540	F...	0.000	4.955	r
						t'..	2.007		A
	COD	1:	2	2.236	3.121	t...	2.377	2.201	r
		2:	11	16.400	2.180	F...	2.133	5.260	A
						t'..	12.237		A
	COLIFORM, FECAL	1:	0	0.000	0.000				
		2:	2	20.000	2.670				
	COLIFORM, TOTAL	1:	0	0.000	0.000				
		2:	2	71.000	5.970				
	CONDUCTANCE, SPEC.	1:	3	2300.310	1.307	t...	3.665	1.997	r
		2:	67	1298.000	1.320	F...	1.075	13.985	A
						t'..	4.230		A
	COPPER	1:	0	0.000	0.000				
		2:	56	0.012	1.330				
	CYANIDE	1:	1	0.010	0.000				
		2:	55	0.010	1.000				
	FLUORIDE	1:	5	0.234	1.707	t...	0.424	1.997	A
		2:	66	0.260	1.730	F...	1.051	6.115	A
						t'..	2.729		A
	HARDNESS, TOTAL	1:	1	760.000	0.000				
		2:	62	447.700	1.380				
	HYDROXIDE	1:	0	0.000	0.000				
		2:	0	0.000	0.000				
	IRON	1:	3	0.083	2.413	t...	4.296	1.997	r
		2:	67	1.029	10.850	F...	7.326	13.985	A
						t'..	3.884		r
	KJELDAHL N	1:	0	0.000	0.000				
		2:	22	1.780	3.100				
	LEAD	1:	2	0.017	2.175	t...	3.649	2.004	r
		2:	56	0.138	3.450	F...	2.540	39.478	A
						t'..	12.234		A
	LITHIUM	1:	0	0.000	0.000				
		2:	11	0.100	1.010				
	MAGNESIUM	1:	6	136.051	1.268	t...	7.216	1.997	r
		2:	65	57.040	1.780	F...	5.897	4.955	r
						t'..	2.390		r
	MANGANESE	1:	0	0.000	0.000				
		2:	44	0.575	6.980				
	MBAS	1:	0	0.000	0.000				
		2:	2	0.010	1.000				
	MERCURY	1:	2	0.001	1.000	t...	8.303	2.004	r
		2:	54	0.003	2.620	F...	0.000	4.955	r
						t'..	2.005		r
	MOLYBDENUM	1:	0	0.000	0.000				
		2:	6	0.100	1.000				
	NICKEL	1:	0	0.000	0.000				
		2:	45	0.054	2.270				

	2:	61	3.900	2.210	F...	3.445	13.989	A
					t'..	4.066		A
NITRITE-N	1:	1	3.000	0.000				
	2:	19	0.220	14.740				
NITROGEN, AMMONIA	1:	0	0.000	0.000				
	2:	14	0.360	3.610				
ORG. CARBON, DISS.	1:	3	13.517	2.475	t...	0.591	2.004	A
	2:	55	18.700	3.440	F...	1.859	14.003	A
					t'..	4.155		A
PH	1:	3	7.700	0.100	t...	19.196	1.999	r
	2:	63	6.320	0.340	F...	11.560	13.988	A
					t'..	3.677		r
PHENOLS	1:	1	0.001	0.000				
	2:	11	0.002	3.120				
PHOSPHATE	1:	2	0.100	1.000	t...	0.000	2.086	X
	2:	20	0.100	1.000	F...	0.000	0.000	E
					t'..	0.000		X
PHOSPHATE, ORTHO	1:	0	0.000	0.000				
	2:	65	0.100	1.410				
POTASSIUM	1:	5	5.573	1.944	t...	1.268	2.060	A
	2:	22	3.460	1.990	F...	1.072	6.305	A
					t'..	2.658		A
RADIO.a GROSS ALPHA	1:	1	25.000	0.000				
	2:	45	7.340	2.470				
RADIO.b RADIUM	1:	0	0.000	0.000				
	2:	27	0.260	2.140				
RADIO.c GROSS BETA	1:	0	0.000	0.000				
	2:	13	9.500	2.540				
SELENIUM	1:	2	0.010	1.000	t...	0.000	2.004	A
	2:	56	0.010	1.360	F...	0.000	6.305	r
					t'..	2.005		A
SILICON DIOXIDE	1:	6	24.187	1.129	t...	3.520	1.996	r
	2:	67	29.200	1.180	F...	1.861	4.953	A
					t'..	2.500		r
SILVER	1:	0	0.000	0.000				
	2:	45	0.013	1.780				
SODIUM	1:	6	248.767	1.232	t...	4.915	1.996	r
	2:	67	151.100	1.570	F...	4.674	4.953	A
					t'..	2.421		r
SOLIDS, TOT. DISS.	1:	2	1968.503	1.402	t...	3.881	1.998	r
	2:	67	777.000	1.150	F...	5.845	3.915	r
					t'..	12.478		A
STRONTIUM	1:	2	1.794	1.421	t...	1.072	2.447	A
	2:	6	2.495	1.560	F...	1.602	39.330	A
					t'..	10.247		A
SULFATE	1:	6	332.936	1.429	t...	7.004	1.996	r

		2:	67	297.000	1.840	F...	2.924	4.954	A
						t'..	2.467		r
	SULFIDE	1:	1	0.200	0.000				
		2:	11	0.160	2.560				
	TEMPERATURE	1:	5	9.100	1.782	t...	0.284	1.997	A
		2:	67	9.333	1.617	F...	1.214	2.776	A
						t'..	2.739		A
	VANADIUM	1:	0	0.000	0.000				
		2:	0	0.000	0.000				
	ZINC	1:	2	0.669	1.065	t...	4.787	2.005	r
		2:	55	0.292	3.460	F...	388.506	39.477	r
						t'..	3.312		r

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*** Statistical Tests ***

Data Set 1: GS-SIIS (79)
Data Set 2: Baseline Alluvial Aquifers

		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
ALKALINITY	1:	1	442.000	0.000				
	2:	67	383.000	1.170				
ALUMINUM	1:	0	0.000	0.000				
	2:	11	0.142	2.140				
AMMONIA	1:	0	0.000	0.000				
	2:	49	0.360	2.490				
ARSENIC	1:	0	0.000	0.000				
	2:	53	0.011	1.560				
BARIUM	1:	0	0.000	0.000				
	2:	45	1.000	1.000				
BERYLLIUM	1:	0	0.000	0.000				
	2:	3	0.106	5.480				
BICARBONATE	1:	1	540.000	0.000				
	2:	67	458.700	1.190				
BORON	1:	1	0.100	0.000				
	2:	65	0.190	6.930				
BROMIDE	1:	0	0.000	0.000				
	2:	8	0.150	4.110				
CADMIUM	1:	0	0.000	0.000				
	2:	54	0.017	2.250				
CALCIUM	1:	1	98.000	0.000				
	2:	67	96.400	1.380				
CARBONATE	1:	1	0.100	0.000				
	2:	47	0.260	8.230				
CHLORIDE	1:	1	14.000	0.000				
	2:	65	12.800	1.730				
CHROMIUM	1:	0	0.000	0.000				
	2:	54	0.011	1.540				
COD	1:	0	0.000	0.000				
	2:	11	16.400	2.180				
COLIFORM, FECAL	1:	0	0.000	0.000				
	2:	2	20.000	2.670				
COLIFORM, TOTAL	1:	0	0.000	0.000				
	2:	2	71.000	5.970				

CONDUCTANCE, SPEC.	1:	2	2545.585	1.087	F...	10.012	1.998	F
	2:	67	1288.000	1.320	F...	11.076	39.481	A
					F'..	11.167		A
COPPER	1:	0	0.000	0.000				
	2:	56	0.012	1.330				
CYANIDE	1:	0	0.000	0.000				
	2:	55	0.010	1.000				
FLUORIDE	1:	1	0.100	0.000				
	2:	66	0.260	1.730				
HARDNESS, TOTAL	1:	0	0.000	0.000				
	2:	62	447.700	1.380				
HYDROXIDE	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
IRON	1:	1	0.050	0.000				
	2:	67	1.029	10.850				
KJELDAHL N	1:	0	0.000	0.000				
	2:	22	1.780	3.100				
LEAD	1:	0	0.000	0.000				
	2:	56	0.138	3.450				
LITHIUM	1:	0	0.000	0.000				
	2:	11	0.100	1.010				
MAGNESIUM	1:	1	184.000	0.000				
	2:	65	57.040	1.780				
MANGANESE	1:	0	0.000	0.000				
	2:	64	0.575	6.980				
MBAS	1:	0	0.000	0.000				
	2:	2	0.010	1.000				
MERCURY	1:	0	0.000	0.000				
	2:	56	0.003	2.630				
MOLYBDENUM	1:	0	0.000	0.000				
	2:	4	0.100	1.000				
NICKEL	1:	0	0.000	0.000				
	2:	45	0.054	2.270				
NITRATE	1:	1	2.200	0.000				
	2:	61	3.900	2.210				
NITRITE-N	1:	0	0.000	0.000				
	2:	19	0.220	14.740				
NITROGEN, AMMONIA	1:	0	0.000	0.000				
	2:	14	0.360	3.610				
ORG. CARBON, DISS.	1:	1	3.500	0.000				
	2:	55	18.700	3.440				
PH	1:	2	7.400	0.141	T...	9.253	1.998	F
	2:	63	6.320	0.340	F...	5.815	39.481	A
					F'..	11.208		A
PHENOLS	1:	0	0.000	0.000				

PHOSPHATE	1:	0	0.000	0.000				
	2:	20	0.100	1.000				
PHOSPHATE, ORTHO	1:	0	0.000	0.000				
	2:	65	0.100	1.410				
POTASSIUM	1:	1	4.500	0.000				
	2:	22	3.660	1.990				
RADIO.a GROSS ALPHA	1:	1	7.500	0.000				
	2:	45	7.340	2.470				
RADIO.b RADIUM	1:	0	0.000	0.000				
	2:	27	0.260	2.140				
RADIO.c GROSS BETA	1:	1	37.000	0.000				
	2:	13	9.500	2.540				
SELENIUM	1:	0	0.000	0.000				
	2:	56	0.010	1.340				
SILICON DIOXIDE	1:	1	27.000	0.000				
	2:	67	29.200	1.180				
SILVER	1:	0	0.000	0.000				
	2:	45	0.013	1.780				
SODIUM	1:	1	190.000	0.000				
	2:	67	151.100	1.570				
SOLIDS, TOT. DISS.	1:	0	0.000	0.000				
	2:	67	777.000	1.150				
STRONTIUM	1:	0	0.000	0.000				
	2:	6	2.495	1.540				
SULFATE	1:	1	961.000	0.000				
	2:	67	297.000	1.840				
SULFIDE	1:	0	0.000	0.000				
	2:	11	0.160	2.560				
TEMPERATURE	1:	2	9.750	0.354	t...	1.308	1.998	A
	2:	67	9.333	1.617	F...	20.865	39.481	A
					t'..	10.134		A
VANADIUM	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
ZINC	1:	0	0.000	0.000				
	2:	55	0.292	3.460				

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*** Statistical Tests ***

Data Set 1: GS-S27 ('79)
Data Set 2: Baseline Alluvial Aquifers

		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
ALKALINITY	1:	9	458.879	1.060	t...	6.621	1.995	r
	2:	67	383.000	1.170	F...	7.260	3.443	r
					t'..	2.162		r
ALUMINUM	1:	2	0.100	1.000	t...	1.529	2.201	A
	2:	11	0.142	2.140	F...	0.000	3.443	r
					t'..	2.228		A
AMMONIA	1:	2	0.355	1.269	t...	0.066	2.012	A
	2:	49	0.360	2.490	F...	14.665	39.474	A
					t'..	10.204		A
ARSENIC	1:	2	0.010	1.000	t...	1.560	2.007	A
	2:	53	0.011	1.560	F...	0.000	39.474	r
					t'..	2.008		A
BARIUM	1:	0	0.000	0.000				
	2:	45	1.000	1.000				
BERYLLIUM	1:	0	0.000	0.000				
	2:	3	0.106	5.480				
BICARBONATE	1:	7	544.869	1.050	t...	7.339	1.996	r
	2:	67	458.700	1.190	F...	12.712	4.244	r
					t'..	2.206		r
BORON	1:	6	0.147	1.436	t...	0.911	1.997	A
	2:	65	0.190	6.920	F...	28.577	4.955	r
					t'..	2.176		A
BROMIDE	1:	2	0.100	1.000	t...	0.811	2.306	A
	2:	8	0.150	4.110	F...	0.000	4.955	r
					t'..	2.365		A
CADMIUM	1:	2	0.010	1.000	t...	4.508	2.006	r
	2:	54	0.017	2.250	F...	0.000	4.955	r
					t'..	2.007		r
CALCIUM	1:	9	95.074	1.392	t...	0.118	1.995	A
	2:	67	94.400	1.380	F...	1.054	2.317	A
					t'..	2.274		A
CARBONATE	1:	5	0.275	9.567	t...	0.054	1.997	A
	2:	67	0.240	8.230	F...	1.148	2.776	A
					t'..	2.737		A
CHLORIDE	1:	9	13.050	1.268	t...	0.185	1.996	A
	2:	65	12.800	1.730	F...	5.372	3.445	r
					t'..	2.183		A

					t'..	2.007		A
COD	1:	2	2.236	3.121	t...	2.377	2.201	r
	2:	11	16.400	2.180	F...	2.133	5.240	A
					t'..	12.237		A
COLIFORM, FECAL	1:	0	0.000	0.000				
	2:	2	20.000	2.470				
COLIFORM, TOTAL	1:	0	0.000	0.000				
	2:	2	71.000	5.970				
CONDUCTANCE, SPEC.	1:	5	1604.245	1.079	t...	4.597	1.997	r
	2:	67	1288.000	1.320	F...	13.333	6.114	r
					t'..	2.478		r
COPPER	1:	0	0.000	0.000				
	2:	56	0.012	1.330				
CYANIDE	1:	2	0.010	1.000	t...	0.000	2.005	X
	2:	55	0.010	1.000	F...	0.000	0.000	E
					t'..	0.000		X
FLUORIDE	1:	8	0.252	1.608	t...	0.173	1.996	A
	2:	66	0.240	1.730	F...	1.332	3.775	A
					t'..	2.319		A
HARDNESS, TOTAL	1:	1	550.000	0.000				
	2:	62	447.700	1.380				
HYDROXIDE	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
IRON	1:	4	0.061	2.204	t...	5.756	1.997	r
	2:	67	1.029	10.850	F...	9.102	8.354	r
					t'..	2.836		r
KJELDAHL N	1:	0	0.000	0.000				
	2:	22	1.780	3.100				
LEAD	1:	2	0.014	1.633	t...	5.955	2.004	r
	2:	56	0.138	3.450	F...	6.376	39.478	A
					t'..	11.594		A
LITHIUM	1:	0	0.000	0.000				
	2:	11	0.100	1.010				
MAGNESIUM	1:	9	77.889	1.169	t...	3.522	1.996	r
	2:	65	57.040	1.780	F...	13.636	3.445	r
					t'..	2.112		r
MANGANESE	1:	0	0.000	0.000				
	2:	64	0.575	6.980				
MBAS	1:	0	0.000	0.000				
	2:	2	0.010	1.000				
MERCURY	1:	2	0.001	1.000	t...	8.308	2.004	r
	2:	56	0.003	2.490	F...	0.000	3.445	r
					t'..	2.005		r
MOLYBDENUM	1:	0	0.000	0.000				
	2:	6	0.100	1.000				

NICKEL	1:	0	0.000	0.000				
	2:	45	0.054	2.270				
NITRATE	1:	5	0.264	6.094	t...	3.306	1.999	r
	2:	61	3.900	2.210	F...	5.194	2.788	r
					t'..	2.766		r
NITRITE-N	1:	1	0.100	0.000				
	2:	19	0.220	14.740				
NITROGEN, AMMONIA	1:	1	0.300	0.000				
	2:	14	0.360	3.610				
ORG. CARBON, DISS.	1:	3	15.623	2.303	t...	0.352	2.004	A
	2:	55	18.700	3.440	F...	2.182	14.003	A
					t'..	4.131		A
PH	1:	6	7.567	0.242	t...	11.580	1.998	r
	2:	63	6.320	0.340	F...	1.974	4.957	A
					t'..	2.492		r
PHENOLS	1:	2	0.001	1.000	t...	2.020	2.201	A
	2:	11	0.002	3.120	F...	0.000	4.957	r
					t'..	2.228		A
PHOSPHATE	1:	2	0.100	1.000	t...	0.000	2.086	X
	2:	20	0.100	1.000	F...	0.000	0.000	E
					t'..	0.000		X
PHOSPHATE, ORTHO	1:	0	0.000	0.000				
	2:	65	0.100	1.410				
POTASSIUM	1:	7	3.731	1.593	t...	0.084	2.052	A
	2:	22	3.660	1.990	F...	2.184	4.445	A
					t'..	2.306		A
RADIO.a GROSS ALPHA	1:	1	6.900	0.000				
	2:	45	7.340	2.470				
RADIO.b RADIUM	1:	0	0.000	0.000				
	2:	27	0.260	2.140				
RADIO.c GROSS BETA	1:	0	0.000	0.000				
	2:	13	9.500	2.540				
SELENIUM	1:	2	0.010	1.000	t...	0.000	2.004	A
	2:	56	0.010	1.360	F...	0.000	4.445	r
					t'..	2.005		A
SILICON DIOXIDE	1:	9	15.872	1.926	t...	2.778	1.995	r
	2:	67	29.200	1.190	F...	15.682	2.317	r
					t'..	2.304		r
SILVER	1:	0	0.000	0.000				
	2:	45	0.013	1.790				
SODIUM	1:	9	147.418	1.184	t...	0.313	1.995	A
	2:	67	151.100	1.570	F...	7.133	3.443	r
					t'..	2.163		A
SOLIDS, TOT. DISS.	1:	2	1164.904	1.018	t...	19.075	1.998	r
	2:	67	777.000	1.150	F...	61.375	39.491	r
					t'..	7.546		r
STRONTIUM	1:	2	1.407	1.417	t...	1.871	2.447	A
	2:	6	2.495	1.560	F...	1.629	39.330	A

SULFATE	1:	9	408.667	1.214	t...	3.236	1.995	r
	2:	67	297.000	1.840	F...	9.887	3.443	r
					t'..	2.138		r
SULFIDE	1:	2	0.283	1.633	t...	1.273	2.201	A
	2:	11	0.160	2.560	F...	3.674	39.410	A
					t'..	9.891		A
TEMPERATURE	1:	7	8.700	1.471	t...	1.073	1.996	A
	2:	67	9.333	1.617	F...	1.208	4.244	A
					t'..	2.403		A
VANADIUM	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
ZINC	1:	2	0.566	1.191	t...	3.181	2.005	r
	2:	55	0.292	3.460	F...	50.429	39.477	r
					t'..	7.539		A

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APPENDIX 5-2.5

Alluvial Aquifer Water Quality
Comparison of Baseline and Report Period
Combined Statistical Analysis

*** Statistical Tests ***

Data Set 1: '79 Alluvial Aquifers
Data Set 2: Baseline Alluvial Aquifers

		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
ALKALINITY	1:	35	440.595	1.277	t...	3.075	1.987	r
	2:	67	383.000	1.170	F...	2.425	1.765	r
					t'..	2.027		r
ALUMINUM	1:	7	0.122	1.689	t...	0.501	2.120	A
	2:	11	0.142	2.140	F...	2.107	4.670	A
					t'..	2.325		A
AMMONIA	1:	6	0.382	1.413	t...	0.309	2.007	A
	2:	49	0.360	2.490	F...	6.963	4.987	r
					t'..	2.336		A
ARSENIC	1:	7	0.010	1.000	t...	1.560	2.002	A
	2:	53	0.011	1.560	F...	0.000	4.987	r
					t'..	2.008		A
BARIUM	1:	0	0.000	0.000				
	2:	45	1.000	1.000				
BERYLLIUM	1:	0	0.000	0.000				
	2:	3	0.106	5.480				
BICARBONATE	1:	27	534.020	1.235	t...	3.316	1.989	r
	2:	67	458.700	1.190	F...	1.472	1.835	A
					t'..	2.044		r
BORON	1:	18	0.144	1.521	t...	1.068	1.993	A
	2:	65	0.190	6.920	F...	21.277	2.315	r
					t'..	2.015		A
BROMIDE	1:	7	0.100	1.000	t...	0.811	2.160	A
	2:	8	0.150	4.110	F...	0.000	2.315	r
					t'..	2.365		A
CADMIUM	1:	7	0.010	1.000	t...	4.808	2.001	r
	2:	54	0.017	2.250	F...	0.000	2.315	r
					t'..	2.007		r
CALCIUM	1:	35	97.861	1.550	t...	0.179	1.987	A
	2:	67	96.400	1.380	F...	1.851	1.765	r
					t'..	2.026		A
CARBONATE	1:	23	0.125	2.866	t...	2.164	1.991	r
	2:	67	0.260	8.230	F...	4.007	2.102	r
					t'..	2.031		r
CHLORIDE	1:	35	13.542	1.596	t...	4.059	1.987	r
	2:	65	12.800	1.730	F...	1.375	1.864	A
					t'..	2.019		r
CHROMIUM	1:	7	0.010	1.000	t...	1.622	2.001	A

	2:	54	0.011	1.540	F...	0.000	1.864	F
					t'..	2.007		A
COD	1:	7	4.771	3.539	t...	2.319	2.120	F
	2:	11	16.400	2.180	F...	2.630	3.760	A
					t'..	2.406		A
COLIFORM, FECAL	1:	0	0.000	0.000				
	2:	2	20.000	2.670				
COLIFORM, TOTAL	1:	0	0.000	0.000				
	2:	2	71.000	5.970				
CONDUCTANCE, SPEC.	1:	22	1644.940	1.423	t...	2.965	1.991	F
	2:	67	1288.000	1.320	F...	1.615	1.896	A
					t'..	2.067		F
COPPER	1:	0	0.000	0.000				
	2:	56	0.012	1.330				
CYANIDE	1:	6	0.010	1.000	t...	0.000	2.001	X
	2:	55	0.010	1.000	F...	0.000	0.000	E
					t'..	0.000		X
FLUORIDE	1:	33	0.250	1.638	t...	0.359	1.988	A
	2:	66	0.260	1.730	F...	1.234	1.891	A
					t'..	2.023		A
HARDNESS, TOTAL	1:	3	721.894	1.284	t...	3.185	1.999	F
	2:	62	447.700	1.380	F...	1.660	13.989	A
					t'..	4.184		A
HYDROXIDE	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
IRON	1:	14	0.031	2.467	t...	6.720	1.994	F
	2:	67	1.029	10.850	F...	6.971	2.603	F
					t'..	2.066		F
KJELDAHL N	1:	0	0.000	0.000				
	2:	22	1.780	3.100				
LEAD	1:	7	0.014	1.589	t...	9.499	2.000	F
	2:	56	0.138	3.450	F...	7.151	4.262	F
					t'..	2.253		F
LITHIUM	1:	0	0.000	0.000				
	2:	11	0.100	1.010				
MAGNESIUM	1:	35	77.738	1.798	t...	2.532	1.987	F
	2:	65	57.040	1.780	F...	1.035	1.769	A
					t'..	2.022		F
MANGANESE	1:	0	0.000	0.000				
	2:	64	0.575	6.980				
MBAS	1:	0	0.000	0.000				
	2:	2	0.010	1.000				
MERCURY	1:	7	0.001	1.000	t...	8.308	2.000	F
	2:	56	0.003	2.690	F...	0.000	1.769	F
					t'..	2.005		F
MOLYBDENUM	1:	0	0.000	0.000				
	2:	6	0.100	1.000				

NITRATE	1:	17	2.699	7.737	t...	0.727	1.995	A
	2:	61	3.900	2.210	F...	4.657	2.010	r
					t'..	2.115		A
NITRITE-N	1:	5	0.125	13.583	t...	0.428	2.074	A
	2:	19	0.220	14.740	F...	1.063	4.350	A
					t'..	2.447		A
NITROGEN, AMMONIA	1:	1	0.300	0.000				
	2:	14	0.360	3.610				
ORG. CARBON, DISS.	1:	13	8.799	2.561	t...	2.436	1.998	r
	2:	55	18.700	3.440	F...	1.726	2.735	A
					t'..	2.131		r
PH	1:	25	7.476	0.271	t...	16.733	1.991	r
	2:	63	6.320	0.340	F...	1.574	2.047	A
					t'..	2.040		r
PHENOLS	1:	6	0.001	1.000	t...	2.020	2.131	A
	2:	11	0.002	3.120	F...	0.000	2.047	r
					t'..	2.228		A
PHOSPHATE	1:	7	0.110	1.300	t...	0.961	2.060	A
	2:	20	0.100	1.000	F...	0.000	2.047	r
					t'..	2.447		A
PHOSPHATE, ORTHO	1:	0	0.000	0.000				
	2:	65	0.100	1.410				
POTASSIUM	1:	23	3.083	1.883	t...	0.859	2.018	A
	2:	22	3.660	1.990	F...	1.170	2.330	A
					t'..	2.077		A
RADIO.a GROSS ALPHA	1:	5	8.276	2.321	t...	0.300	2.013	A
	2:	45	7.340	2.470	F...	1.153	6.165	A
					t'..	2.704		A
RADIO.b RADIUM	1:	0	0.000	0.000				
	2:	27	0.260	2.140				
RADIO.c GROSS BETA	1:	1	37.000	0.000				
	2:	13	9.500	2.540				
SELENIUM	1:	7	0.010	1.000	t...	0.000	2.000	A
	2:	56	0.010	1.360	F...	0.000	6.165	r
					t'..	2.005		A
SILICON DIOXIDE	1:	35	18.928	1.645	t...	5.071	1.997	r
	2:	67	29.200	1.180	F...	9.043	1.765	r
					t'..	2.032		r
SILVER	1:	0	0.000	0.000				
	2:	45	0.013	1.780				
SODIUM	1:	35	149.613	1.401	t...	0.102	1.987	A
	2:	67	151.100	1.570	F...	1.089	1.765	A
					t'..	2.027		A
SOLIDS, TOT. DISS.	1:	7	1322.100	1.443	t...	3.670	1.996	r
	2:	67	777.000	1.150	F...	7.412	2.496	r
					t'..	2.442		r

STRONTIUM	1:	7	1.467	1.762	t...	1.894	2.201	A
	2:	6	2.495	1.560	F...	1.623	5.700	A
					t'..	2.500		A
SULFATE	1:	35	411.227	1.973	t...	2.377	1.987	r
	2:	67	297.000	1.840	F...	1.242	1.765	A
					t'..	2.023		r
SULFIDE	1:	6	0.224	1.327	t...	1.099	2.131	A
	2:	11	0.160	2.560	F...	11.633	5.370	r
					t'..	2.291		A
TEMPERATURE	1:	32	8.809	1.778	t...	1.412	1.988	A
	2:	67	9.333	1.617	F...	1.209	1.789	A
					t'..	2.028		A
VANADIUM	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
ZINC	1:	7	0.412	2.823	t...	0.807	2.000	A
	2:	55	0.292	3.460	F...	1.431	4.265	A
					t'..	2.387		A

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APPENDIX 5-2.6

Deep Oil Shale Aquifer Water Quality
Individual Analyses

STATION: AM-3

	DATE:	1/79	2/79	3/79	4/79	5/79	7/79	10/79
	DEPTH:	35.20	35.50	34.20	35.70	34.48	32.00	32.50
	TEMP:	8	8	9	9	10	12	11
*** WET ANALYSIS ***								
ALUMINUM		0.000	0.000	0.000	0.000	0.000	0.200	0.000
AMMONIA		0.000	0.000	0.000	0.000	0.000	0.000	0.000
ARSENIC		0.000	0.000	0.000	0.000	0.000	-0.010	0.000
BICARBONATE		0.000	0.000	0.000	420.000	410.000	443.000	0.000
CADMIUM		0.000	0.000	0.000	0.000	0.000	-0.010	0.000
CALCIUM		33.000	41.000	39.000	34.000	23.000	32.000	34.400
CARBONATE		0.000	0.000	0.000	6.100	12.000	18.000	0.000
CHLORIDE		17.000	24.000	14.000	14.000	7.000	15.000	9.300
CHROMIUM		0.000	0.000	0.000	0.000	0.000	-0.010	0.000
COPPER		0.000	0.000	0.000	0.000	0.000	0.000	0.000
FLUORIDE		1.300	1.400	1.300	1.300	1.200	1.300	1.200
HYDROXIDE		0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRON		0.000	0.000	0.000	0.000	0.000	-0.050	0.000
LEAD		0.000	0.000	0.000	0.000	0.000	0.020	0.000
MAGNESIUM		57.000	55.000	42.000	57.000	32.000	48.000	49.700
MERCURY		0.000	0.000	0.000	0.000	0.000	-0.001	0.000
NITRATE		0.000	0.000	0.000	0.000	0.000	0.100	0.000
PHOSPHATE		0.000	0.000	0.000	0.000	0.000	-0.100	0.000
POTASSIUM		0.000	0.000	0.000	0.000	0.000	4.500	0.000
SELENIUM		0.000	0.000	0.000	0.000	0.000	-0.010	0.000
SILICON DIOXIDE		11.000	16.000	13.000	14.000	5.000	12.000	14.500
SODIUM		310.000	180.000	165.000	170.000	190.000	180.000	182.000
SULFATE		230.000	89.000	285.000	270.000	220.000	255.000	263.000
SULFIDE		0.000	0.000	0.000	0.000	0.000	-0.020	0.000
ZINC		0.000	0.000	0.000	0.000	0.000	0.020	0.000
RADIO, GROSS ALPHA		0.000	0.000	0.000	0.000	0.000	0.100	0.000
RADIO, GROSS BETA		0.000	0.000	0.000	0.000	0.000	3.000	0.000
HARDNESS, TOTAL		0.000	0.000	0.000	0.000	0.000	0.000	0.000
PH		0.000	8.000	7.800	8.000	8.000	7.600	7.700
CONDUCTANCE, SPEC.		0.000	1270.000	1140.000	1300.000	0.000	1050.000	890.000
SOLIDS, TOT. DISS.		0.000	0.000	0.000	0.000	0.000	742.000	0.000
MANGANESE		0.000	0.000	0.000	0.000	0.000	0.000	0.000
ALKALINITY		370.000	395.000	370.000	410.000	350.000	394.000	362.000
CYANIDE		0.000	0.000	0.000	0.000	0.000	-0.010	0.000
BORON		0.000	0.000	0.000	0.000	0.000	-0.100	0.000
BARIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILVER		0.000	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL		0.000	0.000	0.000	0.000	0.000	-0.010	0.000
LITHIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
ORG. CARBON, DISS.		0.000	0.000	0.000	0.000	0.000	4.100	0.000
NITRITE N		0.000	0.000	0.000	0.000	0.000	0.000	0.000
BROMIDE		0.000	0.000	0.000	0.000	0.000	-0.100	0.000
COD		0.000	0.000	0.000	0.000	0.000	10.000	0.000
PHENOLS		0.000	0.000	0.000	0.000	0.000	-0.001	0.000
NITRATE N		0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
STRONTIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
VANADIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
PHOSPHATE, ORTHO		0.000	0.000	0.000	0.000	0.000	0.000	0.000
NITROGEN, AMMONIA		0.000	0.000	0.000	0.000	0.000	1.000	0.000
		0.000	0.000	0.000	0.000	0.000	0.000	0.000
MBAS		0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, TOTAL		0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, FECAL		0.000	0.000	0.000	0.000	0.000	0.000	0.000

*** SPECTROGRAPHIC ANALYSIS ***

ALUMINUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANTIMONY	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ARSENIC	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BISMUTH	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BORON	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CADMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CALCIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CERIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CESIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHROMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COBALT	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLUMBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COPPER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DYSPROSIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUROPIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GADOLINIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GALLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GERMANIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GOLD	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HAFNIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HOLMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
INDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRIDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRON	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LANTHANUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LEAD	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LITHIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LUTETIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAGNESIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MANGANESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MERCURY	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEODYMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OSMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PALLADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PLATINUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
POTASSIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PRASEODYMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RHENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RHODIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RUBIDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RUTHENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SAMARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SCANDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SELENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILICON	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILVER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SODIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
STRONTIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TANTALUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THALLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THORIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THULIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TITANIUM	0.000	0.000	0.000	0.000	0.000	0.001	0.000
TUNGSTEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
URANIUM	0.000	0.000	0.000	0.000	0.000	0.001	0.000
VANADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
YTTERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000

YTTRIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ZINC	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ZIRCONIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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STATION: GS-M1

DATE:	1/79	2/79	3/79	4/79	5/79	7/79	8/79	9/79	10/79
DEPTH:	0.00	598.15	609.25	617.95	627.62	644.36	648.10	652.80	653.40
TEMP:	9	10	12	14	14	16	15	0	14
*** WET ANALYSIS ***									
ALUMINUM	0.000	0.000	0.000	0.000	0.000	-0.100	0.000	0.000	0.000
AMMONIA	0.000	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
ARSENIC	0.000	0.000	0.000	0.000	0.000	-0.010	0.000	0.000	0.000
BICARBONATE	0.000	0.000	0.000	400.000	390.000	377.000	0.000	395.000	400.000
CADMIUM	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000
CALCIUM	18.000	48.000	34.000	39.000	32.000	34.000	43.800	47.700	50.270
CARBONATE	0.000	0.000	0.000	-0.100	-0.100	18.000	0.000	11.200	14.970
CHLORIDE	12.000	24.000	17.000	14.000	14.000	14.000	9.200	8.200	6.400
CHROMIUM	0.000	0.000	0.000	0.000	0.000	-0.010	0.000	0.000	0.000
COPPER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FLUORIDE	0.170	0.100	0.200	0.300	0.300	-0.100	0.270	0.070	0.110
HYDROXIDE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.000
IRON	0.000	0.000	0.000	0.000	0.000	-0.050	0.000	0.000	0.500
LEAD	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000
MAGNESIUM	30.000	29.000	30.000	30.000	30.000	40.000	41.400	39.900	43.040
MERCURY	0.000	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.000
NITRATE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025
PHOSPHATE	0.000	0.000	0.000	0.000	0.000	-0.100	0.000	0.000	0.000
POTASSIUM	0.000	0.000	0.000	0.000	0.000	2.300	0.000	1.400	0.200
SELENIUM	0.000	0.000	0.000	0.000	0.000	-0.010	0.000	0.000	0.000
SILICON DIOXIDE	3.400	19.000	18.000	20.000	18.000	19.000	20.750	28.500	27.000
SODIUM	380.000	240.000	240.000	230.000	240.000	200.000	213.000	200.000	228.000
SULFATE	330.000	270.000	370.000	340.000	360.000	329.000	389.000	361.000	368.000
SULFIDE	0.000	0.000	0.000	0.000	0.000	-0.200	0.000	0.000	0.000
ZINC	0.000	0.000	0.000	0.000	0.000	0.200	0.000	0.000	0.000
RADIO. GROSS ALPHA	0.000	0.000	0.000	0.000	0.000	1.800	0.000	0.000	0.000
RADIO. GROSS BETA	0.000	0.000	0.000	0.000	0.000	17.000	0.000	0.000	0.000
HARDNESS, TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PH	0.000	7.800	7.200	7.400	7.200	8.500	8.000	0.000	8.200
CONDUCTANCE, SPEC.	0.000	1340.000	1280.000	1450.000	0.000	1310.000	0.000	0.000	1300.000
SOLIDS, TOT. DISS.	0.000	0.000	0.000	0.000	0.000	883.000	0.000	0.000	0.000
MANGANESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ALKALINITY	285.000	385.000	300.000	330.000	320.000	323.000	324.000	318.000	356.000
CYANIDE	0.000	0.000	0.000	0.000	0.000	-0.010	0.000	0.000	0.000
BORON	0.000	0.000	0.000	0.000	0.000	0.100	0.000	0.033	0.040
BARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILVER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL	0.000	0.000	0.000	0.000	0.000	-0.010	0.000	0.000	0.000
LITHIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ORG. CARBON, DISS.	0.000	0.000	0.000	0.000	0.000	3.700	0.000	0.000	0.000
NITRITE-N	0.000	0.000	0.000	0.000	0.000	-0.100	0.000	0.000	0.000
BROMIDE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COD	0.000	0.000	0.000	0.000	0.000	3.000	0.000	0.000	0.000
PHENOLS	0.000	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.000
KJELDAHL N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
STRONTIUM	0.000	0.000	0.000	0.000	0.000	0.300	0.000	0.000	0.000
VANADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PHOSPHATE, ORTHO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NITROGEN, AMMONIA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NRAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, FECAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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STATION: GS-M2

DATE:	1/79	2/79	3/79	4/79	5/79	7/79	10/79
DEPTH:	217.80	217.16	217.89	217.60	218.18	217.57	217.90
TEMP:	9	7	10	11	11	14	11
*** WET ANALYSIS ***							
ALUMINUM	-0.100	0.000	0.000	0.000	0.000	-0.100	0.000
AMMONIA	0.000	0.000	0.000	0.000	0.000	1.300	0.000
ARSENIC	-0.050	0.000	0.000	0.000	0.000	-0.010	0.000
BICARBONATE	495.000	0.000	0.000	220.000	570.000	553.000	0.000
CADMIUM	-0.010	0.000	0.000	0.000	0.000	-0.010	0.000
CALCIUM	41.000	66.000	4.900	8.200	89.000	80.000	5.980
CARBONATE	18.000	0.000	0.000	190.000	-0.100	18.000	0.000
CHLORIDE	25.000	17.000	10.000	48.000	14.000	12.000	2.000
CHROMIUM	-0.010	0.000	0.000	0.000	0.000	-0.010	0.000
COPPER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FLUORIDE	-0.150	0.100	-0.150	-0.150	0.200	-0.100	1.850
HYDROXIDE	0.000	0.000	94.000	0.000	0.000	0.000	0.000
IRON	-0.050	0.000	0.000	0.000	0.000	-0.050	0.000
LEAD	-0.010	0.000	0.000	0.000	0.000	0.030	0.000
MAGNESIUM	130.000	150.000	17.000	85.000	150.000	122.000	50.000
MERCURY	0.001	0.000	0.000	0.000	0.000	-0.001	0.000
NITRATE	2.300	0.000	0.000	0.000	0.000	0.000	0.000
PHOSPHATE	0.100	0.000	0.000	0.000	0.000	-0.100	0.000
POTASSIUM	2.700	0.000	0.000	0.000	0.000	2.700	0.000
SELENIUM	-0.010	0.000	0.000	0.000	0.000	-0.010	0.000
SILICON DIOXIDE	13.000	21.000	10.000	2.000	19.000	20.000	0.900
SODIUM	210.000	220.000	340.000	260.000	230.000	180.000	154.000
SULFATE	630.000	540.000	410.000	470.000	750.000	552.000	193.000
SULFIDE	-0.200	0.000	0.000	0.000	0.000	-0.200	0.000
ZINC	-0.100	0.000	0.000	0.000	0.000	0.100	0.000
RADIO, GROSS ALPHA	0.000	0.000	0.000	0.000	0.000	1.600	0.000
RADIO, GROSS BETA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HARDNESS, TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PH	8.300	7.400	8.000	8.400	7.200	8.200	7.800
CONDUCTANCE, SPEC.	1200.000	1925.000	1240.000	1875.000	0.000	1890.000	1500.000
SOLIDS, TOT. DISS.	1300.000	0.000	0.000	0.000	0.000	1213.000	0.000
MANGANESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ALKALINITY	420.000	450.000	0.000	340.000	470.000	477.000	493.000
CYANIDE	-0.010	0.000	0.000	0.000	0.000	-0.010	0.000
BORON	-0.100	0.000	0.000	0.000	0.000	-0.100	0.000
BARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILVER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL	0.000	0.000	0.000	0.000	0.000	-0.010	0.000
PLATINUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ORG. CARBON, DISS.	4.000	0.000	0.000	0.000	0.000	2.000	0.000
NITRITE-N	-0.010	0.000	0.000	0.000	0.000	0.100	0.000
BROMIDE	0.100	0.000	0.000	0.000	0.000	0.000	0.000
COD	20.000	0.000	0.000	0.000	0.000	5.000	0.000
PHENOLS	0.040	0.000	0.000	0.000	0.000	0.001	0.000
KJELDAHL N	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
STRONTIUM	2.100	0.000	0.000	0.000	0.000	0.100	0.000
VANADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ORTHOPHOSPH., DISSOL	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NITROGEN, AMMONIA	0.200	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NTAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, FECAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000

STATION: GS MR

	DATE:	1/79	2/79	3/79	4/79	5/79	7/79	10/79
	DEPTH:	0.00	12.54	12.10	12.40	12.37	12.15	12.15
	TEMP:	9	8	10	11	10	10	12
*** WET ANALYSIS ***								
ALUMINUM		0.550	0.000	0.000	0.000	0.000	0.400	0.000
AMMONIA		-0.140	0.000	0.000	0.000	0.000	0.000	0.000
ARSENIC		0.010	0.000	0.000	0.000	0.000	-0.010	0.000
BICARBONATE		0.000	0.000	0.000	280.000	380.000	439.000	0.000
CADMIUM		-0.010	0.000	0.000	0.000	0.000	-0.010	0.000
CALCIUM		8.200	13.000	8.200	4.900	14.000	13.000	17.100
CARBONATE		120.000	0.000	0.000	160.000	91.000	83.000	0.000
CHLORIDE		45.000	17.000	24.000	17.000	21.000	10.000	10.400
CHROMIUM		-0.010	0.000	0.000	0.000	0.000	-0.010	0.000
COPPER		0.000	0.000	0.000	0.000	0.000	0.000	0.000
FLUORIDE		1.700	1.800	1.500	1.700	1.800	1.800	0.140
HYDROXIDE		0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRON		0.090	0.000	0.000	0.000	0.000	-0.050	0.000
LEAD		-0.010	0.000	0.000	0.000	0.000	0.030	0.000
MAGNESIUM		56.000	45.000	58.000	56.000	62.000	63.000	121.000
MERCURY		0.001	0.000	0.000	0.000	0.000	-0.001	0.000
NITRATE		0.470	0.000	0.000	0.000	0.000	0.300	0.000
PHOSPHATE		-0.100	0.000	0.000	0.000	0.000	-0.100	0.000
POTASSIUM		2.000	0.000	0.000	0.000	1.700	2.300	0.000
SELENIUM		-0.010	0.000	0.000	0.000	0.000	0.010	0.000
SILICON DIOXIDE		3.900	4.600	20.000	-1.000	6.000	7.000	2.900
SODIUM		300.000	270.000	310.000	260.000	260.000	250.000	192.000
SULFATE		330.000	460.000	350.000	270.000	340.000	540.000	570.000
SULFIDE		-0.100	0.000	0.000	0.000	0.000	0.020	0.000
ZINC		0.500	0.000	0.000	0.000	0.000	0.120	0.000
RADIO, GROSS ALPHA		0.000	0.000	0.000	0.000	0.000	0.000	0.000
RADIO, GROSS BETA		0.000	0.000	0.000	0.000	0.000	20.000	0.000
HARDNESS, TOTAL		0.000	0.000	0.000	0.000	0.000	0.000	0.000
PH		0.000	7.900	8.000	8.900	8.300	8.700	8.000
CONDUCTANCE, SPEC.		0.000	1550.000	1440.000	0.000	0.000	1400.000	1500.000
SOLIDS, TOT. DISS.		910.000	0.000	0.000	0.000	0.000	986.000	0.000
MANGANESE		0.000	0.000	0.000	0.000	0.000	0.000	0.000
ALKALINITY		450.000	0.000	360.000	360.000	390.000	429.000	407.000
CYANIDE		-0.010	0.000	0.000	0.000	0.000	0.010	0.000
BORON		0.180	0.000	0.000	0.000	0.000	0.200	0.000
BARIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILVER		-0.010	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL		0.000	0.000	0.000	0.000	0.000	-0.010	0.000
LITHIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
ORG. CARBON, DISS.		14.000	0.000	0.000	0.000	0.000	3.800	0.000
NITRITE N		0.010	0.000	0.000	0.000	0.000	0.000	0.000
BROMIDE		0.150	0.000	0.000	0.000	0.000	-0.100	0.000
COD		2.500	0.000	0.000	0.000	0.000	23.000	0.000
PHENOLS		0.001	0.000	0.000	0.000	0.000	-0.001	0.000
KJELDAHL N		0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
STRONTIUM		2.500	0.000	0.000	0.000	0.000	1.700	0.000
VANADIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000
PHOSPHATE, ORTHO		0.000	0.000	0.000	0.000	0.000	0.000	0.000
NITROGEN, AMMONIA		0.140	0.000	0.000	0.000	0.000	0.100	0.000
MBAS		0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, TOTAL		0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, FECAL		0.000	0.000	0.000	0.000	0.000	0.000	0.000

*** SPECTROGRAPHIC ANALYSIS ***

ALUMINUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANTIMONY	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ARSENIC	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BISMUTH	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BORON	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CADMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CALCIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CERIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CESIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHROMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COBALT	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLUMBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COPPER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DYSPROSIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUROPIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GADOLINIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GALLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GERMANIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GOLD	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HAFNIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HOLMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
INDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRIDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRON	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LANTHANUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LEAD	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LITHIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LUTETIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAGNESIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MANGANESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MERCURY	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEODYMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OSMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PALLADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PLATINUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
POTASSIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PRASEODYMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RHENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RHODIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RUBIDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RUTHENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SAMARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SCANDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SELENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILICON	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILVER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SODIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
STRONTIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TANTALUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THALLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THORIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THULIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TITANIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TUNGSTEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
URANIUM	0.000	0.000	0.000	0.000	0.000	-0.001	0.000
VANADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
YTTERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000

YTTRIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ZINC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ZIRCONIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

STATION: GS-M4

	DATE:	1/79	2/79	3/79	4/79	5/79	7/79	8/79	9/79	10/79
	DEPTH:	523.40	532.48	538.50	540.60	542.93	547.78	550.10	550.30	550.60
	TEMP:	9	9	11	14	14	15	15	0	14
*** WET ANALYSIS ***										
ALUMINUM		-0.100	0.000	0.000	0.000	0.000	-0.100	0.000	0.000	0.000
AMMONIA		0.000	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
ARSENIC		-0.050	0.000	0.000	0.000	0.000	-0.010	0.000	0.000	0.000
BICARBONATE		620.000	0.000	0.000	700.000	670.000	716.000	0.000	690.000	659.000
CADMIUM		-0.010	0.000	0.000	0.000	0.000	-0.010	0.000	0.000	0.000
CALCIUM		64.000	105.000	41.000	95.000	120.000	157.000	82.500	131.000	99.410
CARBONATE		6.000	0.000	0.000	-0.100	-0.100	-0.100	0.000	0.000	0.000
CHLORIDE		32.000	24.000	24.000	17.000	28.000	16.000	11.000	9.200	6.400
CHROMIUM		-0.010	0.000	0.000	0.000	0.000	-0.010	0.000	0.000	0.000
COPPER		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FLUORIDE		0.190	0.100	0.300	-0.150	0.300	-0.100	0.240	0.160	0.150
HYDROXIDE		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRON		-0.050	0.000	0.000	0.000	0.000	-0.050	0.000	0.110	2.500
LEAD		-0.010	0.000	0.000	0.000	0.000	0.040	0.000	0.000	0.000
MAGNESIUM		120.000	135.000	110.000	130.000	130.000	105.000	117.000	133.000	82.820
MERCURY		-0.001	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.000
NITRATE		0.460	0.000	0.000	0.000	0.000	0.000	0.000	0.075	0.055
PHOSPHATE		-0.100	0.000	0.000	0.000	0.000	-0.100	0.000	0.000	0.000
POTASSIUM		3.000	0.000	0.000	0.000	0.000	3.000	0.000	2.000	1.000
SELENIUM		-0.010	0.000	0.000	0.000	0.000	-0.010	0.000	0.000	0.000
SILICON DIOXIDE		-0.100	31.000	28.000	27.000	27.000	36.000	20.750	42.750	38.750
SODIUM		250.000	240.000	250.000	240.000	250.000	200.000	2.250	236.000	266.000
SULFATE		650.000	645.000	550.000	680.000	730.000	645.000	4.250	750.000	618.000
SULFIDE		-0.200	0.000	0.000	0.000	0.000	-0.200	0.000	0.000	0.000
ZINC		-0.100	0.000	0.000	0.000	0.000	0.320	0.000	0.000	0.000
RADIO. GROSS ALPHA		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RADIO. GROSS BETA		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HARDNESS, TOTAL		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PH		0.000	0.000	0.000	7.000	7.800	8.000	8.300	0.000	7.900
CONDUCTANCE, SPEC.		0.000	0.000	0.000	2300.000	0.000	2200.000	0.000	0.000	2200.000
SOLIDS, TOT. DISS.		1600.000	0.000	0.000	0.000	0.000	1520.000	0.000	0.000	0.000
MANGANESE		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ALKALINITY		510.000	510.000	460.000	570.000	550.000	586.000	480.000	570.000	545.000
CYANIDE		-0.010	0.000	0.000	0.000	0.000	-0.010	0.000	0.000	0.000
BORON		0.160	0.000	0.000	0.000	0.000	0.300	0.000	0.197	0.120
BARIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILVER		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL		0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000
LITHIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ORG. CARBON, DISS.		16.000	0.000	0.000	0.000	0.000	4.000	0.000	0.000	0.000
NITRITE-N		-0.010	0.000	0.000	0.000	0.000	-0.100	0.000	0.000	0.000
BROMIDE		0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COD		20.000	0.000	0.000	0.000	0.000	7.000	0.000	0.000	0.000
PHENOLS		0.010	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.000
KJELDAHL N		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
STRONTIUM		0.200	0.000	0.000	0.000	0.000	0.300	0.000	0.000	0.000
VANADIUM		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PHOSPHATE, ORTHO		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NITROGEN, AMMONIA		1.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MBA		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, TOTAL		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, FECAL		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

STATION: 6S 15U

DATE:	1/79	2/79	3/79	4/79	5/79	7/79	8/79	9/79	10/79
DEPTH:	292.30	295.05	298.60	299.60	300.52	305.25	305.30	306.95	307.20
TEMP:	10	10	11	11	0	14	14	14	12
*** WET ANALYSIS ***									
ALUMINUM	-0.100	0.000	0.000	0.000	0.000	0.200	0.000	0.000	0.000
AMMONIA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ARSENIC	-0.050	0.000	0.000	0.000	0.000	-0.010	0.000	0.000	0.000
BICARBONATE	510.000	0.000	0.000	410.000	420.000	467.000	0.000	614.000	647.000
CADMIUM	-0.010	0.000	0.000	0.000	0.000	-0.010	0.000	0.000	0.000
CALCIUM	67.000	62.000	34.000	82.000	133.000	104.000	86.000	138.000	94.600
CARBONATE	30.000	0.000	0.000	30.000	-0.100	-0.100	0.000	0.000	0.000
CHLORIDE	18.000	24.000	31.000	20.000	17.000	14.000	12.800	7.600	10.600
CHROMIUM	-0.010	0.000	0.000	0.000	0.000	-0.010	0.000	0.000	0.000
COPPER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FLUORIDE	0.740	0.500	1.400	0.600	0.500	0.200	1.000	0.235	1.550
HYDROXIDE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRON	0.050	0.000	0.000	0.000	0.000	-0.180	0.000	0.700	0.270
LEAD	-0.010	0.000	0.000	0.000	0.000	0.040	0.000	0.000	0.000
MAGNESIUM	170.000	135.000	110.000	150.000	170.000	155.000	133.000	184.000	167.000
MERCURY	-0.001	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.000
NITRATE	3.000	0.000	0.000	0.000	0.000	-0.100	0.000	0.161	0.010
PHOSPHATE	0.170	0.000	0.000	0.000	0.000	-0.100	0.000	0.000	0.000
POTASSIUM	4.500	0.000	0.000	0.000	0.000	3.000	0.000	1.000	2.000
SELENIUM	-0.010	0.000	0.000	0.000	0.000	-0.010	0.000	0.000	0.000
SILICON DIOXIDE	18.000	21.000	30.000	14.000	22.000	28.000	20.750	36.250	31.500
SODIUM	300.000	250.000	290.000	150.000	230.000	270.000	233.000	292.000	282.000
SULFATE	750.000	815.000	600.000	730.000	1000.000	900.000	825.000	1013.000	1063.000
SULFIDE	-0.200	0.000	0.000	0.000	0.000	0.310	0.000	0.000	0.000
ZINC	-0.100	0.000	0.000	0.000	0.000	0.070	0.000	0.000	0.000
RADIO. GROSS ALPHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RADIO. GROSS BETA	0.000	0.000	0.000	0.000	0.000	44.000	0.000	0.000	0.000
HARDNESS, TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PH	0.000	7.800	8.000	8.100	0.000	7.300	8.700	0.000	7.800
CONDUCTANCE, SPEC.	0.000	2050.000	1800.000	1900.000	0.000	1870.000	0.000	0.000	2500.000
SOLIDS, TOT. DISS.	1400.000	0.000	0.000	0.000	0.000	2450.000	0.000	0.000	0.000
MANGANESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ALKALINITY	440.000	410.000	380.000	360.000	500.000	542.000	404.000	502.000	535.000
CYANIDE	0.010	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000
BORON	-0.100	0.000	0.000	0.000	0.000	0.200	0.000	0.300	0.000
BARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILVER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL	0.000	0.000	0.000	0.000	0.000	-0.010	0.000	0.000	0.000
LITHIUM	0.000	0.000	0.000	0.000	0.000	2.000	0.000	0.000	0.000
ORG. CARBON, DISS.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NITRITE-N	-0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BROMIDE	-0.100	0.000	0.000	0.000	0.000	-0.100	0.000	0.000	0.000
COD	20.000	0.000	0.000	0.000	0.000	20.000	0.000	0.000	0.000
PHENOLS	0.020	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.000
KJELDAHL N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
STRONTIUM	2.700	0.000	0.000	0.000	0.000	1.700	0.000	0.000	0.000
VANADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PHOSPHATE, ORTHO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NITROGEN, AMMONIA	1.400	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MBAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, FECAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

SPECTROGRAPHIC ANALYSIS

ALUMINUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANTIMONY	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ARSENIC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BISMUTH	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BORON	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CADMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CALCIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CERIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CESIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHROMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COBALT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLUMBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COPPER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DYSPROSIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUROPIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GADOLINIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GALLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GERMANIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GOLD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HAFNIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HOLMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
INDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRIDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRON	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LANTHANUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LEAD	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LITHIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LUTETIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAGNESIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MANGANESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MERCURY	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEODYMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OSMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PALLADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PLATINUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
POTASSIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PRASEODYMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RHENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RHODIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RUBIDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RUTHENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SAMARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SCANDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SELENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILICON	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILVER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SODIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
STRONTIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TANTALUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THALLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THORIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THULIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TITANIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TUNGSTEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
URANIUM	0.000	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.000
VANADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
YTTERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

YTTRIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ZINC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ZIRCONIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

STATION: 65-151

DATE:	1/79	2/79	3/79	4/79	7/79	9/79	10/79
DEPTH:	372.07	371.03	371.44	372.53	372.83	375.35	375.00
TEMP:	0	10	11	12	15	0	0
*** WET ANALYSIS ***							
ALUMINUM	-0.100	0.000	0.000	0.000	0.300	0.000	0.000
AMMONIA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ARSENIC	-0.050	0.000	0.000	0.000	0.010	0.000	0.000
BICARBONATE	1700.000	0.000	0.000	1520.000	547.000	1633.000	1654.000
CADMIUM	-0.010	0.000	0.000	0.000	0.010	0.000	0.000
CALCIUM	3.700	2.900	3.300	4.900	4.400	4.300	2.590
CARBONATE	54.000	0.000	0.000	55.000	112.000	57.420	4.240
CHLORIDE	53.000	17.000	44.000	47.000	17.000	2.800	3.200
CHROMIUM	-0.010	0.000	0.000	0.000	-0.010	0.000	0.000
COPPER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FLUORIDE	47.000	5.400	25.000	13.000	9.000	55.500	41.000
HYDROXIDE	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRON	-0.050	0.000	0.000	0.000	-0.050	0.005	0.077
LEAD	-0.010	0.000	0.000	0.000	0.020	0.000	0.000
MAGNESIUM	57.000	73.000	64.000	60.000	56.000	34.800	23.800
MERCURY	0.001	0.000	0.000	0.000	-0.001	0.000	0.000
NITRATE	1.900	0.000	0.000	0.000	0.200	0.030	0.009
PHOSPHATE	1.400	0.000	0.000	0.000	-0.400	0.000	0.000
POTASSIUM	6.500	0.000	0.000	0.000	4.000	3.400	2.000
SELENIUM	-0.010	0.000	0.000	0.000	-0.010	0.000	0.000
SILICON DIOXIDE	7.600	3.000	20.000	3.000	2.000	5.200	5.400
SODIUM	770.000	310.000	580.000	580.000	360.000	740.000	620.000
SULFATE	270.000	410.000	400.000	270.000	330.000	215.000	87.500
SULFIDE	0.200	0.000	0.000	0.000	-0.020	0.000	0.000
ZINC	-0.100	0.000	0.000	0.000	0.050	0.000	0.000
RADIO. GROSS ALPHA	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RADIO. GROSS BETA	0.000	0.000	0.000	0.000	73.000	0.000	0.000
HARDNESS, TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PH	8.400	0.000	0.000	0.000	9.000	0.000	0.000
CONDUCTANCE, SPEC.	3100.000	1425.000	2300.000	3400.000	1450.000	0.000	0.000
SOLIDS, TOT. DISS.	2100.000	0.000	0.000	0.000	1170.000	0.000	0.000
MANGANESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ALKALINITY	1400.000	620.000	900.000	1290.000	542.000	1350.000	1347.000
CYANIDE	0.010	0.000	0.000	0.000	-0.010	0.000	0.000
BORON	1.200	0.000	0.000	0.000	1.000	0.540	0.000
BARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILVER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL	0.000	0.000	0.000	0.000	-0.010	0.000	0.000
LITHIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ORG. CARBON, DISS.	0.000	0.000	0.000	0.000	7.000	0.000	0.000
NITRITE-N	0.010	0.000	0.000	0.000	0.000	0.000	0.000
BROMIDE	-0.100	0.000	0.000	0.000	0.100	0.000	0.000
COD	20.000	0.000	0.000	0.000	45.000	0.000	0.000
PHENOLS	0.000	0.000	0.000	0.000	0.001	0.000	0.000
KJELDAHL N	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANTIMONY	0.050	0.000	0.000	0.000	0.100	0.000	0.000
VANADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PHOSPHATE, ORTHO	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NITROGEN, AMMONIA	1.400	0.000	0.000	0.000	0.100	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MBAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLIFORM, FECAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000

*** SPECTROGRAPHIC ANALYSIS ***

ALUMINUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ANTIMONY	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ARSENIC	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BERYLLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BISMUTH	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BORON	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CADMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CALCIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CERIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CESIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CHROMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COBALT	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COLUMBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COPPER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DYSPROSIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EUROPIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GADOLINIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GALLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GERMANIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
GOLD	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HAFNIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HOLMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
INDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRIDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IRON	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LANTHANUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LEAD	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LITHIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LUTETIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAGNESIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MANGANESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MERCURY	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MOLYBDENUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEODYMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NICKEL	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OSMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PALLADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PLATINUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
POTASSIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PRASEODYMIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RHENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RHODIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RUBIDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RUTHENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SAMARIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SCANDIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SELENIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILICON	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SILVER	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SODIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
STRONTIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TANTALUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THALLIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THORIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
THULIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TITANIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TUNGSTEN	0.000	0.000	0.000	0.000	0.000	0.000	0.000
URANIUM	0.000	0.000	0.000	0.000	-0.001	0.000	0.000
VANADIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
YTTERBIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000

YTTRIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ZINC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ZIRCONIUM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

APPENDIX 5-2.7

Deep Oil Shale Aquifer Water Quality
Individual Statistical Summaries

STATION: AM-3 (79) 7 samplings

Parameter	Obs.	Min	Ma	Mean	St Dev	99% Conf Inter		Traces
ALUMINUM	1	0.200	0.200	0.200	0.000	0.000	0.000	0
AMMONIA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ARSENIC	1	0.010	0.010	0.010	0.000	0.000	0.000	1
BICARBONATE	3	410.000	490.000	453.693	1.095	239.133	858.469	0
CADMIUM	1	0.010	0.010	0.010	0.000	0.000	0.000	1
CALCIUM	7	23.000	41.000	33.302	1.205	25.119	44.151	0
CARBONATE	3	6.100	18.000	10.963	1.727	0.236	508.314	0
CHLORIDE	7	7.000	24.000	13.513	1.483	7.443	24.535	0
CHROMIUM	1	0.010	0.010	0.010	0.000	0.000	0.000	1
COPPER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
FLUORIDE	7	1.200	1.400	1.270	1.041	1.141	1.308	0
HYDROXIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
IRON	1	0.050	0.050	0.050	0.000	0.000	0.000	1
LEAD	1	0.020	0.020	0.020	0.000	0.000	0.000	0
MAGNESIUM	7	32.000	62.000	50.570	1.246	36.265	70.518	0
MERCURY	1	0.001	0.001	0.001	0.000	0.000	0.000	1
NITRATE	1	0.100	0.100	0.100	0.000	0.000	0.000	0
PHOSPHATE	1	0.100	0.100	0.100	0.000	0.000	0.000	1
POTASSIUM	1	4.500	4.500	4.500	0.000	0.000	0.000	0
SELENIUM	1	0.010	0.010	0.010	0.000	0.000	0.000	1
SILICON DIOXIDE	7	5.000	16.000	11.577	1.477	6.414	20.896	0
SODIUM	7	165.000	310.000	192.351	1.240	138.828	266.509	0
SULFATE	7	89.000	285.000	217.789	1.499	110.037	401.840	0
SULFIDE	1	0.020	0.020	0.020	0.000	0.000	0.000	1
ZINC	1	0.020	0.020	0.020	0.000	0.000	0.000	0
RADIO, GROSS ALPHA	1	0.100	0.100	0.100	0.000	0.000	0.000	0
RADIO, GROSS BETA	1	3.000	3.000	3.000	0.000	0.000	0.000	0
HARDNESS, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PH	6	7.400	8.000	7.850	0.176	7.533	8.167	0
CONDUCTANCE, SPEC.	5	890.000	1300.000	1114.470	1.160	792.496	1568.870	0
SOLIDS, TOT. DISS.	1	762.000	762.000	762.000	0.000	0.000	0.000	0
MANGANESE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ALKALINITY	7	350.000	410.000	378.301	1.058	347.364	411.775	0
CYANIDE	1	0.010	0.010	0.010	0.000	0.000	0.000	1
BORON	1	0.100	0.100	0.100	0.000	0.000	0.000	1
BARIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILVER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NICKEL	1	0.010	0.010	0.010	0.000	0.000	0.000	1
LITHIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ORG. CARBON, DISS.	1	4.100	4.100	4.100	0.000	0.000	0.000	0
NITRITE-N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BROMIDE	1	0.100	0.100	0.100	0.000	0.000	0.000	1
COD	1	10.000	10.000	10.000	0.000	0.000	0.000	0
PHENOLS	1	0.001	0.001	0.001	0.000	0.000	0.000	1
K-JELDAHL N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BERYLLIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MOLYBDENUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
STRONTIUM	1	2.200	2.200	2.200	0.000	0.000	0.000	0
VANADIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHOSPHATE, ORTHO	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITROGEN, AMMONIA	1	1.000	1.000	1.000	0.000	0.000	0.000	0
TEMPERATURE	7	8.000	12.000	9.800	1.515	7.507	12.093	0
MPN	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, FECAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0

STATION: GS-M1 (79) 9 samplings

Parameter	Obs.	Min	Ma	Mean	St Dev	99% Conf Inter		Traces
ALUMINUM	1	0.100	0.100	0.100	0.000	0.000	0.000	1
AMMONIA	1	0.100	0.100	0.100	0.000	0.000	0.000	0
ARSENIC	1	0.010	0.010	0.010	0.000	0.000	0.000	1
BICARBONATE	5	377.000	400.000	390.299	1.027	368.048	413.839	0
CADMIUM	1	0.010	0.010	0.010	0.000	0.000	0.000	1
CALCIUM	9	18.000	50.220	37.026	1.375	25.377	54.021	0
CARBONATE	5	0.100	18.000	1.977	15.322	0.004	1058.078	3
CHLORIDE	9	6.400	24.000	12.795	1.512	7.834	20.896	0
CHROMIUM	1	0.010	0.010	0.010	0.000	0.000	0.000	1
COPPER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
FLUORIDE	9	0.070	0.300	0.152	1.724	0.083	0.303	1
HYDROXIDE	1	0.100	0.100	0.100	0.000	0.000	0.000	0
IRON	2	0.050	0.500	0.158	5.095	0.000	0.000	1
LEAD	1	0.030	0.030	0.030	0.000	0.000	0.000	0
MAGNESIUM	9	29.000	43.040	34.363	1.186	28.061	47.079	0
MERCURY	1	0.001	0.001	0.001	0.000	0.000	0.000	1
NITRATE	1	0.025	0.025	0.025	0.000	0.000	0.000	0
PHOSPHATE	1	0.100	0.100	0.100	0.000	0.000	0.000	1
POTASSIUM	3	0.200	2.300	0.844	3.636	0.000	7425.582	0
SELENIUM	1	0.010	0.010	0.010	0.000	0.000	0.000	1
SILICON DIOXIDE	9	3.400	28.500	17.130	1.876	8.120	34.138	0
SODIUM	9	200.000	320.000	234.364	1.212	188.638	297.424	0
SULFATE	9	270.000	387.000	344.644	1.113	303.505	391.345	0
SULFIDE	1	0.200	0.200	0.200	0.000	0.000	0.000	1
ZINC	1	0.200	0.200	0.200	0.000	0.000	0.000	0
RADIO. GROSS ALPHA	1	1.800	1.800	1.800	0.000	0.000	0.000	0
RADIO. GROSS BETA	1	17.000	17.000	17.000	0.000	0.000	0.000	0
HARDNESS, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PH	7	7.200	8.500	7.757	0.509	4.986	8.528	0
CONDUCTANCE, SPEC.	5	1280.000	1450.000	1334.769	1.050	1191.874	1494.419	0
SOLIDS, TOT. DISS.	1	888.000	888.000	888.001	0.000	0.000	0.000	0
MANGANESE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ALKALINITY	9	285.000	385.000	325.447	1.042	293.454	361.370	0
CYANIDE	1	0.010	0.010	0.010	0.000	0.000	0.000	1
BORON	3	0.040	0.100	0.071	1.643	0.002	2.293	0
BARIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILVER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NICKEL	1	0.010	0.010	0.010	0.000	0.000	0.000	1
LITHIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ORG. CARBON, DISS.	1	3.700	3.700	3.700	0.000	0.000	0.000	0
NITRITE-N	1	0.100	0.100	0.100	0.000	0.000	0.000	1
BROMIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COD	1	7.000	7.000	7.000	0.000	0.000	0.000	0
PHENOLS	1	0.001	0.001	0.001	0.000	0.000	0.000	1
KJELDAHL N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BERYLLIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MOLYBDENUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
STRONTIUM	1	0.300	0.300	0.300	0.000	0.000	0.000	0
VANADIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHOSPHATE, ORTHO	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITROGEN, AMMONIA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
TEMPERATURE	8	9.000	16.000	13.300	2.585	9.882	16.718	0
MBAS	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, FECAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0

STATION: GS-M2 (79) 7 samplings

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
ALUMINUM	2	0.100	0.100	0.100	1.000	0.100	0.100	2
AMMONIA	1	1.300	1.300	1.300	0.000	0.000	0.000	0
ARSENIC	2	0.010	0.050	0.022	3.121	0.000	0.000	2
BICARBONATE	4	270.000	570.000	430.435	1.571	93.888	1273.357	0
CADMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
CALCIUM	7	4.900	80.000	23.174	3.514	3.470	155.215	0
CARBONATE	4	0.100	190.000	8.858	24.265	0.000	0.000	1
CHLORIDE	7	2.000	63.000	13.837	2.898	2.765	69.253	0
CHROMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
COPPER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
FLUORIDE	7	0.100	1.850	0.199	2.754	0.043	0.923	4
HYDROXIDE	1	94.000	94.000	94.000	0.000	0.000	0.000	0
IRON	2	0.050	0.050	0.050	1.000	0.050	0.050	2
LEAD	2	0.010	0.030	0.017	2.175	0.000	0.000	1
MAGNESIUM	7	17.000	150.000	82.396	2.221	24.625	275.695	0
MERCURY	2	0.001	0.001	0.001	1.000	0.001	0.001	2
NITRATE	1	2.300	2.300	2.300	0.000	0.000	0.000	0
PHOSPHATE	2	0.100	0.100	0.100	1.000	0.100	0.100	2
POTASSIUM	2	2.700	2.700	2.700	1.000	2.700	2.700	0
SELENIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
SILICON DIOXIDE	7	0.900	21.000	7.843	3.519	1.172	52.523	0
SODIUM	7	154.000	340.000	221.743	1.286	151.561	324.481	0
SULFATE	7	193.000	750.000	474.705	1.555	243.260	926.354	0
SULFIDE	2	0.200	0.200	0.200	1.000	0.200	0.200	2
ZINC	2	0.100	0.100	0.100	1.000	0.100	0.100	1
RADIO. GROSS ALPHA	1	1.600	1.600	1.600	0.000	0.000	0.000	0
RADIO. GROSS BETA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
HARDNESS, TOTAL ,	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PH	7	7.200	8.400	7.929	0.427	7.282	8.575	0
CONDUCTANCE, SPEC.	6	1200.000	1925.000	1574.340	1.243	1062.838	2332.007	0
SOLIDS, TOT. DISS.	2	1213.000	1300.000	1255.747	1.050	0.000	0.000	0
MANGANESE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ALKALINITY	6	340.000	493.000	434.805	1.143	343.165	556.202	0
CYANIDE	2	0.010	0.010	0.010	1.000	0.010	0.010	2
BORON	2	0.100	0.100	0.100	1.000	0.100	0.100	2
BARIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILVER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NICKEL	1	0.010	0.010	0.010	0.000	0.000	0.000	1
LITHIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ORG. CARBON, DISS.	2	2.000	6.000	3.464	2.175	0.000	0.000	0
NITRITE-N	2	0.010	0.100	0.032	5.025	0.000	0.000	2
BROMIDE	1	0.100	0.100	0.100	0.000	0.000	0.000	1
COD	2	5.000	20.000	10.000	2.665	0.000	0.000	0
PHENOLS	2	0.001	0.040	0.006	13.573	0.000	0.000	1
KJELDAHL N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BERYLLIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MOLYBDENUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
STRONTIUM	2	0.700	2.100	1.122	2.435	0.000	0.000	0
VANADIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHOSPHATE, ORTHO	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITROGEN, AMMONIA	1	0.700	0.700	0.700	0.000	0.000	0.000	0
TEMPERATURE	7	7.500	14.000	10.457	2.079	7.511	13.904	0
MBAS	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, FECAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0

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STATION: GS M3 (79) 7 samplings

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
ALUMINUM	2	0.400	0.550	0.469	1.253	0.000	0.000	0
AMMONIA	1	0.140	0.140	0.140	0.000	0.000	0.000	1
ARSENIC	2	0.010	0.010	0.010	1.000	0.010	0.010	2
BICARBONATE	3	280.000	439.000	360.138	1.258	71.884	1804.276	0
CADMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
CALCIUM	7	4.900	17.100	10.620	1.566	5.384	20.947	0
CARBONATE	4	83.000	160.000	109.738	1.345	40.414	297.972	0
CHLORIDE	7	10.000	45.000	18.278	1.675	8.372	39.909	0
CHROMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
COPPER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
FLUORIDE	7	0.140	1.800	1.198	2.583	0.285	5.035	0
HYDROXIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
IRON	2	0.050	0.090	0.067	1.515	0.000	0.000	1
LEAD	2	0.010	0.030	0.017	2.175	0.000	0.000	1
MAGNESIUM	7	56.000	121.000	66.227	1.313	43.871	99.974	0
MERCURY	2	0.001	0.001	0.001	1.000	0.001	0.001	2
NITRATE	2	0.200	0.470	0.307	1.830	0.000	0.000	0
PHOSPHATE	2	0.100	0.100	0.100	1.000	0.100	0.100	2
POTASSIUM	3	1.700	2.300	1.985	1.143	0.687	5.739	0
SELENIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
SILICON DIOXIDE	7	1.000	20.000	4.602	2.486	1.160	18.258	1
SODIUM	7	192.000	310.000	240.533	1.169	205.707	329.970	0
SULFATE	7	270.000	570.000	398.274	1.317	262.502	604.272	0
SULFIDE	2	0.020	0.100	0.045	3.171	0.000	0.000	2
ZINC	2	0.120	0.500	0.245	2.743	0.000	0.000	0
RADIO. GROSS ALPHA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
RADIO. GROSS BETA	1	20.000	20.000	20.000	0.000	0.000	0.000	0
HARDNESS, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PH	6	7.800	8.900	8.283	0.436	7.498	9.069	0
CONDUCTANCE, SPEC.	4	1440.000	1600.000	1521.341	1.046	1304.269	1771.823	0
SOLIDS, TOT. DISS.	2	910.000	984.000	947.239	1.058	0.000	0.000	0
MANGANESE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ALKALINITY	6	360.000	450.000	397.944	1.096	337.482	469.239	0
CYANIDE	2	0.010	0.010	0.010	1.000	0.010	0.010	2
BORON	2	0.180	0.200	0.190	1.077	0.002	21.762	0
BARIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILVER	1	0.010	0.010	0.010	0.000	0.000	0.000	1
NICKEL	1	0.010	0.010	0.010	0.000	0.000	0.000	1
LITHIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ORG. CARBON, DISS.	2	3.800	14.000	7.797	2.764	0.000	0.000	0
NITRITE-N	1	0.010	0.010	0.010	0.000	0.000	0.000	1
BROMIDE	2	0.100	0.150	0.127	1.332	0.000	0.000	1
COD	2	2.500	23.000	7.583	4.803	0.000	0.000	0
PHENOLS	2	0.001	0.001	0.001	1.000	0.001	0.001	2
KJELDAHL N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BERYLLIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MOLYBDENUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
STRONTIUM	2	1.700	2.500	2.062	1.314	0.000	0.000	0
VANADIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHOSPHATE, ORTHO	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITROGEN, AMMONIA	2	0.100	0.140	0.113	1.269	0.000	0.000	1
TEMPERATURE	7	8.500	12.600	10.157	1.344	8.173	12.191	0
MBAS	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, FECAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0

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STATION: GS-M4 ('79) 9 samplings

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
ALUMINUM	2	0.100	0.100	0.100	1.000	0.100	0.100	2
AMMONIA	1	0.100	0.100	0.100	0.000	0.000	0.000	0
ARSENIC	2	0.010	0.050	0.022	3.121	0.000	0.000	7
BICARBONATE	6	620.000	716.000	675.101	1.053	615.524	740.445	0
CADMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
CALCIUM	9	41.000	157.000	93.185	1.497	57.757	150.344	0
CARBONATE	4	0.100	6.000	0.278	7.746	0.000	277.186	3
CHLORIDE	9	6.400	32.000	16.506	1.730	8.615	31.623	0
CHROMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
COPPER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
FLUORIDE	9	0.100	0.300	0.174	1.512	0.107	0.285	2
HYDROXIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
IRON	4	0.050	2.500	0.162	6.437	0.000	86.389	2
LEAD	2	0.010	0.040	0.020	2.665	0.000	0.000	1
MAGNESIUM	9	82.820	135.000	114.035	1.169	97.151	140.452	0
MERCURY	2	0.001	0.001	0.001	1.000	0.001	0.001	2
NITRATE	3	0.055	0.460	0.124	3.149	0.000	388.464	0
PHOSPHATE	2	0.100	0.100	0.100	1.000	0.100	0.100	2
POTASSIUM	4	1.000	3.000	2.060	1.679	0.359	11.824	0
SELENIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
SILICON DIOXIDE	9	0.100	42.750	14.234	6.829	1.662	158.528	1
SODIUM	9	2.250	246.000	143.264	4.757	22.527	911.123	0
SULFATE	9	6.250	750.000	391.057	4.729	61.919	2469.759	0
SULFIDE	2	0.200	0.200	0.200	1.000	0.200	0.200	2
ZINC	2	0.100	0.320	0.179	2.276	0.000	0.000	1
RADIO. GROSS ALPHA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
RADIO. GROSS BETA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
HARDNESS, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PH	5	7.000	8.300	7.800	0.485	6.484	8.914	0
CONDUCTANCE, SPEC.	3	2200.000	2300.000	2232.842	1.026	1865.157	2673.008	0
SOLIDS, TOT. DISS.	2	1520.000	1600.000	1559.488	1.037	0.000	0.000	0
MANGANESE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ALKALINITY	9	440.000	586.000	529.602	1.087	479.730	584.660	0
CYANIDE	2	0.010	0.010	0.010	1.000	0.010	0.010	2
BORON	4	0.100	0.300	0.162	1.638	0.031	0.857	1
BARIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILVER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NICKEL	1	0.010	0.010	0.010	0.000	0.000	0.000	1
LITHIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ORG. CARBON, DISS.	2	4.000	14.000	8.000	2.665	0.000	0.000	0
NITRITE N	2	0.010	0.100	0.032	5.095	0.000	0.000	2
BROMIDE	1	0.100	0.100	0.100	0.000	0.000	0.000	1
COD	2	4.000	20.000	10.954	2.343	0.000	0.000	0
PHENOLS	2	0.001	0.010	0.003	5.095	0.000	0.000	1
KJELDAHL N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BERYLLIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MOLYBDENUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
STRONTIUM	2	0.500	0.700	0.471	1.515	0.000	0.000	0
VANADIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHOSPHATE, ORTHO	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITROGEN, AMMONIA	1	1.400	1.400	1.400	0.000	0.000	0.000	0
TEMPERATURE	5	9.000	15.500	12.137	2.776	9.204	14.521	0
BOD	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, FECAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0

STATION: GS-150 (79) 2 samplings

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
ALUMINUM	2	0.100	0.200	0.141	1.433	0.000	0.000	1
AMMONIA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ARSENIC	2	0.010	0.050	0.022	3.121	0.000	0.000	2
BICARBONATE	4	410.000	662.000	549.747	1.204	407.609	796.379	0
CADMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
CALCIUM	9	34.000	138.000	82.819	1.539	49.667	138.100	0
CARBONATE	4	0.100	30.000	1.732	26.926	0.000	0.000	2
CHLORIDE	9	7.600	31.000	15.971	1.533	9.591	26.428	0
CHROMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
COPPER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
FLUORIDE	9	0.200	1.550	0.608	2.041	0.261	1.417	0
HYDROXIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
IRON	4	0.050	0.270	0.147	2.087	0.012	1.753	2
LEAD	2	0.010	0.040	0.020	2.665	0.000	0.000	1
MAGNESIUM	9	110.000	184.000	145.255	1.186	118.674	177.788	0
MERCURY	2	0.001	0.001	0.001	1.000	0.001	0.001	2
NITRATE	4	0.010	3.000	0.143	10.413	0.000	401.143	1
PHOSPHATE	2	0.100	0.120	0.110	1.138	0.000	401.538	1
POTASSIUM	4	1.000	4.500	2.250	1.899	0.262	19.822	0
SELENIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
SILICON DIOXIDE	9	14.000	36.250	23.653	1.354	16.508	33.891	0
SODIUM	9	150.000	300.000	250.523	1.241	193.908	323.618	0
SULFATE	9	600.000	1063.000	842.587	1.203	676.908	1048.813	0
SULFIDE	2	0.200	0.310	0.249	1.363	0.000	0.000	1
ZINC	2	0.020	0.100	0.045	3.121	0.000	0.000	1
RADIO. GROSS ALPHA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
RADIO. GROSS BETA	1	44.000	44.000	44.000	0.000	0.000	0.000	0
HARDNESS, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PH	6	7.300	8.700	7.950	0.459	7.122	8.778	0
CONDUCTANCE, SPEC.	5	1800.000	2500.000	2007.459	1.141	1482.539	2718.235	0
SOLIDS, TOT. DISS.	2	1400.000	2450.000	1852.027	1.485	0.000	0.000	0
MANGANESE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ALKALINITY	9	360.000	542.000	448.601	1.147	373.674	538.553	0
CYANIDE	2	0.010	0.010	0.010	1.000	0.010	0.010	2
BORON	3	0.100	0.300	0.182	1.743	0.004	8.967	1
BARIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILVER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NICKEL	1	0.010	0.010	0.010	0.000	0.000	0.000	1
LITHIUM	1	2.000	2.000	2.000	0.000	0.000	0.000	0
ORG. CARBON, DISS.	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITRITE N	1	0.010	0.010	0.010	0.000	0.000	0.000	1
BROMIDE	2	0.100	0.100	0.100	1.000	0.100	0.100	2
COD	2	20.000	20.000	20.000	1.000	20.000	20.000	0
PHENOLS	2	0.001	0.020	0.004	8.317	0.000	0.000	1
KJELDAHL N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BERYLLIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MOLYBDENUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
STRONTIUM	2	1.700	2.700	2.147	1.387	0.000	0.000	0
VANADIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHOSPHATE, ORTHO	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITROGEN, AMMONIA	2	0.100	1.400	0.374	6.473	0.000	0.000	0
TEMPERATURE	8	10.000	19.500	13.250	3.143	9.067	17.433	0
MBAS	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, FECAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0

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STATION: GS-1SI (79) 7 samplings

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
ALUMINUM	2	0.100	0.300	0.173	2.175	0.000	0.000	1
AMMONIA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ARSENIC	2	0.010	0.050	0.022	3.121	0.000	0.000	2
BICARBONATE	5	547.000	1700.000	1307.255	1.630	424.327	4027.355	0
CADMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
CALCIUM	7	2.530	9.800	4.476	1.582	2.237	8.950	0
CARBONATE	5	4.240	112.000	38.166	3.546	2.071	703.208	0
CHLORIDE	7	2.800	53.000	16.386	3.467	2.496	107.575	0
CHROMIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
COPPER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
FLUORIDE	7	5.400	55.500	21.799	2.411	5.754	82.587	0
HYDROXIDE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
IRON	4	0.005	0.077	0.031	3.456	0.000	2.051	2
LEAD	2	0.010	0.020	0.014	1.633	0.000	0.000	1
MAGNESIUM	7	23.800	73.000	50.022	1.477	27.724	90.253	0
MERCURY	2	0.001	0.001	0.001	1.000	0.001	0.001	2
NITRATE	4	0.009	1.800	0.039	10.128	0.000	244.278	0
PHOSPHATE	2	0.400	1.600	0.800	2.665	0.000	0.000	1
POTASSIUM	4	2.000	6.500	3.699	1.623	0.723	18.921	0
SELENIUM	2	0.010	0.010	0.010	1.000	0.010	0.010	2
SILICON DIOXIDE	7	2.000	20.000	4.988	2.138	1.579	15.757	0
SODIUM	7	310.000	770.000	539.269	1.416	318.458	913.183	0
SULFATE	7	87.500	410.000	257.085	1.696	115.589	571.787	0
SULFIDE	2	0.020	0.200	0.063	5.095	0.000	0.000	2
ZINC	2	0.050	0.100	0.071	1.633	0.000	0.000	1
RADIO. GROSS ALPHA	0	0.000	0.000	0.000	0.000	0.000	0.000	0
RADIO. GROSS BETA	1	73.000	73.000	73.000	0.000	0.000	0.000	0
HARDNESS, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PH	2	8.400	9.000	8.700	0.424	-18.308	35.708	0
CONDUCTANCE, SPEC.	5	1625.000	3400.000	2304.524	1.410	1044.343	5085.333	0
SOLIDS, TOT. DISS.	2	1170.000	2100.000	1567.483	1.512	0.000	0.000	0
MANGANESE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ALKALINITY	7	542.000	1400.000	1001.138	1.498	542.989	1845.851	0
CYANIDE	2	0.010	0.010	0.010	1.000	0.010	0.010	2
BORON	3	0.540	1.700	0.992	1.724	0.021	42.544	0
BARIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILVER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NICKEL	1	0.010	0.010	0.010	0.000	0.000	0.000	1
LITHIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ORG. CARBON, DISS.	1	7.000	7.000	7.000	0.000	0.000	0.000	0
NITRITE N	1	0.010	0.010	0.010	0.000	0.000	0.000	1
BROMIDE	2	0.100	0.100	0.100	1.000	0.100	0.100	2
COD	2	20.000	35.000	27.458	1.485	0.000	0.000	0
PHENOLS	2	0.001	0.030	0.005	11.079	0.000	0.000	1
KJELDAHL N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BERYLLIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MOLYBDENUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
STRONTIUM	2	0.100	0.250	0.158	1.912	0.000	0.000	0
VANADIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHOSPHATE, ORTHO	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITROGEN, AMMONIA	2	0.100	1.400	0.374	6.473	0.000	0.000	1
TEMPERATURE	4	10.000	15.000	12.125	2.175	4.791	19.459	0
DBAS	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, FECAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0

APPENDIX 5-2.8

Deep Oil Shale Aquifer Water Quality
Combined Statistical Summaries

STATION: 479 Upper OS Aquifer 48 samplings

Parameter	Obs.	Min	Max	Mean	St Dev	99% Conf Inter		Traces
ALUMINUM	10	0.100	0.550	0.156	1.913	0.078	0.314	6
AMMONIA	4	0.100	1.300	0.207	3.444	0.003	13.370	1
ARSENIC	10	0.010	0.050	0.016	2.176	0.007	0.038	10
BICARBONATE	27	220.000	716.000	490.234	1.347	414.824	576.572	0
CADMIUM	10	0.010	0.010	0.010	1.000	0.010	0.010	10
CALCIUM	48	4.900	157.000	39.240	2.526	27.283	54.437	0
CARBONATE	24	0.100	190.000	4.333	17.613	0.508	23.225	8
CHLORIDE	48	2.000	68.000	15.017	1.769	12.007	18.782	0
CHROMIUM	10	0.010	0.010	0.010	1.000	0.010	0.010	10
COPPER	0	0.000	0.000	0.000	0.000	0.000	0.000	0
FLUORIDE	48	0.070	1.850	0.391	2.980	0.254	0.599	7
HYDROXIDE	2	0.100	94.000	3.066	126.547	0.000	0.000	0
IRON	15	0.050	2.500	0.111	3.147	0.044	0.275	9
LEAD	10	0.010	0.040	0.020	1.844	0.010	0.038	4
MAGNESIUM	48	17.000	184.000	74.917	1.346	58.908	95.277	0
MERCURY	10	0.001	0.001	0.001	1.000	0.001	0.001	10
NITRATE	12	0.010	3.000	0.168	5.400	0.035	0.814	1
PHOSPHATE	10	0.100	0.120	0.102	1.059	0.096	0.108	9
POTASSIUM	17	0.200	4.500	1.943	2.067	1.144	3.301	0
SELENIUM	10	0.010	0.010	0.010	1.000	0.010	0.010	10
SILICON DIOXIDE	48	0.100	42.750	12.541	3.169	7.978	19.713	2
SODIUM	48	2.250	380.000	212.226	2.014	161.257	279.306	0
SULFATE	48	4.250	1063.000	417.661	2.229	305.015	571.908	0
SULFIDE	10	0.020	0.310	0.123	2.705	0.042	0.362	9
ZINC	10	0.020	0.500	0.104	2.812	0.034	0.320	3
RADIO. GROSS ALPHA	3	0.100	1.300	0.660	5.134	0.000638	913.426	0
RADIO. GROSS BETA	4	3.000	44.000	14.555	3.101	0.320	661.716	0
HARDNESS, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PH	37	7.000	8.900	7.927	0.434	7.729	8.125	0
CONDUCTANCE, SPEC.	28	890.000	2500.000	1550.543	1.295	1350.873	1779.725	0
SOLIDS, TOT. DISS.	10	762.000	2450.000	1238.935	1.415	845.201	1792.713	0
MANGANESE	0	0.000	0.000	0.000	0.000	0.000	0.000	0
ALKALINITY	46	285.000	586.000	414.682	1.212	385.183	449.459	0
CYANIDE	10	0.010	0.010	0.010	1.000	0.010	0.010	10
BORON	15	0.040	0.300	0.130	1.705	0.085	0.199	5
BARIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
SILVER	1	0.010	0.010	0.010	0.000	0.000	0.000	1
NICKEL	6	0.010	0.010	0.010	1.000	0.010	0.010	6
LITHIUM	1	2.000	2.000	2.000	0.000	0.000	0.000	0
ORG. CARBON, DISS.	8	2.000	16.000	5.386	2.087	2.036	14.252	0
NITRITE-N	7	0.010	0.100	0.027	3.474	0.004	0.173	7
BROMIDE	7	0.100	0.150	0.106	1.176	0.084	0.134	6
COD	10	2.500	23.000	10.953	2.140	4.804	24.968	0
PHENOLS	10	0.001	0.040	0.002	4.468	0.000	0.012	7
KJELDAHL N	0	0.000	0.000	0.000	0.000	0.000	0.000	0
BERYLLIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
MOLYBDENUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
STRONTIUM	10	0.300	2.700	1.220	2.165	0.578	2.814	0
VANADIUM	0	0.000	0.000	0.000	0.000	0.000	0.000	0
PHOSPHATE, ORTHO	0	0.000	0.000	0.000	0.000	0.000	0.000	0
NITROGEN, AMMONIA	7	0.100	1.400	0.469	3.458	0.063	2.675	1
TEMPERATURE	45	7.500	19.500	11.769	2.700	10.672	12.866	0
OILS	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, TOTAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0
COLIFORM, FECAL	0	0.000	0.000	0.000	0.000	0.000	0.000	0

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APPENDIX 5-2.9

Deep Oil Shale Aquifer Water Quality
Comparison of Baseline and Report Period
Individual Statistical Analysis

*** Statistical Tests ***

Data Set 1: AM-3 ('79)
Data Set 2: Baseline Upper OS Aquifer

		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
ALKALINITY	1:	7	378.201	1.058	t...	2.308	1.975	r
	2:	144	408.000	1.350	F...	28.333	4.188	r
					t'..	2.191		r
ALUMINUM	1:	1	0.200	0.000				
	2:	34	0.145	2.300				
AMMONIA	1:	0	0.000	0.000				
	2:	121	0.300	2.310				
ARSENIC	1:	1	0.010	0.000				
	2:	142	0.010	1.200				
BARIUM	1:	0	0.000	0.000				
	2:	105	0.980	1.250				
BERYLLIUM	1:	0	0.000	0.000				
	2:	1	0.010	0.000				
BICARBONATE	1:	3	453.093	1.095	t...	1.026	1.976	A
	2:	144	482.000	1.430	F...	15.532	13.940	r
					t ..	3.888		A
BORON	1:	1	0.100	0.000				
	2:	144	0.331	3.230				
BROMIDE	1:	1	0.100	0.000				
	2:	37	0.070	2.610				
CADMIUM	1:	1	0.010	0.000				
	2:	140	0.010	1.390				
CALCIUM	1:	7	33.302	1.205	t...	0.374	1.975	A
	2:	144	34.800	3.070	F...	34.180	4.188	r
					t ..	2.143		A
CARBONATE	1:	3	10.963	1.727	t...	5.281	1.976	r
	2:	144	0.850	73.240	F...	62.029	13.940	r
					t'..	3.222		r
CHLORIDE	1:	7	13.513	1.483	t...	0.722	1.975	A
	2:	144	12.040	2.000	F...	3.094	4.188	A
					t ..	2.321		A
CHROMIUM	1:	1	0.010	0.000				
	2:	143	0.012	1.570				
COD	1:	1	10.000	0.000				
	2:	39	17.700	4.690				
COLIFORM, FECAL	1:	0	0.000	0.000				

	2:	0	0.000	0.000				
COLIFORM, TOTAL	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
CONDUCTANCE, SPEC.	1:	5	1114.470	1.160	t...	1.861	1.974	A
	2:	144	1267.000	1.250	F...	2.240	4.060	A
					t'..	2.728		A
COPPER	1:	0	0.000	0.000				
	2:	144	0.074	2.410				
CYANIDE	1:	1	0.010	0.000				
	2:	141	0.010	1.310				
FLUORIDE	1:	7	1.270	1.061	t...	9.889	1.975	r
	2:	144	0.410	3.840	F...	516.336	4.188	r
					t'..	1.997		r
HARDNESS, TOTAL	1:	0	0.000	0.000				
	2:	124	328.000	1.940				
HYDROXIDE	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
IRON	1:	1	0.050	0.000				
	2:	144	5.016	4.150				
KJELDAHL N	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
LEAD	1:	1	0.020	0.000				
	2:	144	0.173	5.270				
LITHIUM	1:	0	0.000	0.000				
	2:	89	0.130	1.940				
MAGNESIUM	1:	7	50.570	1.246	t...	0.185	1.975	A
	2:	144	51.500	1.890	F...	8.377	4.188	r
					t'..	2.325		A
MANGANESE	1:	0	0.000	0.000				
	2:	144	0.131	2.370				
MBAS	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
MERCURY	1:	1	0.001	0.000				
	2:	144	0.004	2.780				
MOLYBDENUM	1:	0	0.000	0.000				
	2:	20	0.130	2.340				
NICKEL	1:	1	0.010	0.000				
	2:	104	0.019	1.670				
NITRATE	1:	1	0.100	0.000				
	2:	125	0.210	2.590				
NITRITE-N	1:	0	0.000	0.000				
	2:	38	0.070	3.920				
NITROGEN, AMMONIA	1:	1	1.000	0.000				
	2:	19	0.510	2.030				
ORG. CARBON, DISS.	1:	1	4.100	0.000				

	2:	128	8.500	1.750				
PH	1:	6	7.850	0.176	t...	13.033	1.976	r
	2:	140	6.780	0.470	F...	7.131	4.892	r
					t'..	2.450		r
PHENOLS	1:	1	0.001	0.000				
	2:	39	0.003	4.420				
PHOSPHATE	1:	1	0.100	0.000				
	2:	0	0.000	0.000				
PHOSPHATE, ORTHO	1:	0	0.000	0.000				
	2:	142	0.100	1.210				
POTASSIUM	1:	1	4.500	0.000				
	2:	39	2.190	1.990				
RADIO.a GROSS ALPHA	1:	1	0.100	0.000				
	2:	100	3.480	3.180				
RADIO.b RADIUM	1:	0	0.000	0.000				
	2:	22	0.170	1.830				
RADIO.c GROSS BETA	1:	1	3.000	0.000				
	2:	22	12.700	2.800				
SELENIUM	1:	1	0.010	0.000				
	2:	142	0.010	1.210				
SILICON DIOXIDE	1:	7	11.577	1.477	t...	4.993	1.976	r
	2:	142	25.600	2.020	F...	3.250	4.189	A
					t'..	2.390		r
SILVER	1:	0	0.000	0.000				
	2:	104	0.011	2.060				
SODIUM	1:	7	192.351	1.240	t...	1.155	1.975	A
	2:	144	212.000	1.300	F...	1.408	4.188	A
					t'..	2.419		A
SOLIDS, TOT. DISS.	1:	1	762.000	0.000				
	2:	144	905.000	1.280				
STRONTIUM	1:	1	2.200	0.000				
	2:	20	2.893	2.890				
SULFATE	1:	7	217.789	1.499	t...	2.552	1.976	r
	2:	142	325.000	1.510	F...	1.036	4.189	A
					t'..	2.427		r
SULFIDE	1:	1	0.020	0.000				
	2:	40	0.630	5.550				
TEMPERATURE	1:	7	2.800	1.515	t...	4.057	1.975	r
	2:	141	12.223	2.022	F...	1.781	4.188	A
					t'..	2.414		r
VANADIUM	1:	0	0.000	0.000				
	2:	1	0.000	0.000				
ZINC	1:	1	0.020	0.000				
	2:	144	0.263	2.970				

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*** Statistical Tests ***

Data Set 1: GS-M1 ('79)
Data Set 2: Baseline Upper OS Aquifer

		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
ALKALINITY	1:	9	325.646	1.092	t...	5.848	1.975	r
	2:	144	408.000	1.350	F...	11.627	3.378	r
					t'..	2.176		r
ALUMINUM	1:	1	0.100	0.000				
	2:	34	0.145	2.300				
AMMONIA	1:	1	0.100	0.000				
	2:	121	0.300	2.310				
ARSENIC	1:	1	0.010	0.000				
	2:	142	0.010	1.200				
BARIUM	1:	0	0.000	0.000				
	2:	105	0.980	1.250				
BERYLLIUM	1:	0	0.000	0.000				
	2:	1	0.010	0.000				
BICARBONATE	1:	5	390.299	1.026	t...	6.607	1.976	r
	2:	144	482.000	1.430	F...	194.178	6.060	r
					t'..	2.101		r
BORON	1:	3	0.071	1.643	t...	5.083	1.976	r
	2:	144	0.331	3.230	F...	5.576	13.940	A
					t'..	4.135		r
BROMIDE	1:	0	0.000	0.000				
	2:	37	0.070	2.610				
CADMIUM	1:	1	0.010	0.000				
	2:	140	0.010	1.390				
CALCIUM	1:	9	37.026	1.375	t...	0.438	1.975	A
	2:	144	34.800	3.070	F...	12.406	3.378	r
					t'..	2.171		A
CARBONATE	1:	5	1.977	15.322	t...	0.636	1.976	A
	2:	144	0.880	73.940	F...	2.406	6.060	A
					t'..	2.724		A
CHLORIDE	1:	9	12.795	1.512	t...	0.407	1.975	A
	2:	144	12.040	2.600	F...	2.911	3.378	A
					t'..	2.274		A
CHROMIUM	1:	1	0.010	0.000				
	2:	143	0.012	1.500				
COD	1:	1	9.000	0.000				
	2:	39	17.700	4.690				

COLIFORM, FECAL	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
COLIFORM, TOTAL	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
CONDUCTANCE, SPEC.	1:	5	1334.688	1.050	t...	1.815	1.976	A
	2:	144	1247.000	1.250	F...	20.917	6.040	r
					t'..	2.481		A
COPPER	1:	0	0.000	0.000				
	2:	144	0.074	2.410				
CYANIDE	1:	1	0.010	0.000				
	2:	141	0.010	1.310				
FLUORIDE	1:	2	0.159	1.726	t...	4.432	1.975	r
	2:	144	0.410	3.840	F...	6.077	3.378	r
					t'..	2.222		r
HARDNESS, TOTAL	1:	0	0.000	0.000				
	2:	124	328.000	1.940				
HYDROXIDE	1:	1	0.100	0.000				
	2:	0	0.000	0.000				
IRON	1:	2	0.158	5.035	t...	2.987	1.976	r
	2:	144	5.016	4.150	F...	1.309	3.778	A
					t'..	12.649		A
KJELDAHL N	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
LEAD	1:	1	0.030	0.000				
	2:	144	0.173	5.270				
LITHIUM	1:	0	0.000	0.000				
	2:	39	0.130	1.940				
MAGNESIUM	1:	2	34.363	1.186	t...	5.203	1.975	r
	2:	144	51.500	1.890	F...	13.926	3.378	r
					t'..	2.162		r
MANGANESE	1:	0	0.000	0.000				
	2:	144	0.131	2.370				
MBAS	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
MERCURY	1:	1	0.001	0.000				
	2:	144	0.004	2.780				
MOLYBDENUM	1:	0	0.000	0.000				
	2:	70	0.130	2.340				
NICKEL	1:	1	0.010	0.000				
	2:	104	0.019	1.470				
NITRATE	1:	1	0.05	0.000				
	2:	1 5	0.210	2.590				
NITRITE-N	1:	1	0.100	0.000				
	2:	3:	0.070	1.930				
NITROGEN, AMMONIA	1:	0	0.000	0.000				
	2:	19	0.510	2.020				

ORG. CARBON, DISS.	1:	1	3.700	0.000				
	2:	129	8.500	1.750				
PH	1:	7	7.757	0.509	t...	4.973	1.976	r
	2:	140	6.780	0.470	F...	1.173	2.373	A
					t'..	2.430		r
PHENOLS	1:	1	0.001	0.000				
	2:	39	0.003	4.620				
PHOSPHATE	1:	1	0.100	0.000				
	2:	0	0.000	0.000				
PHOSPHATE, ORTHO	1:	0	0.000	0.000				
	2:	142	0.100	1.210				
POTASSIUM	1:	3	0.864	3.636	t...	1.275	2.021	A
	2:	39	2.190	1.990	F...	3.519	3.473	r
					t'..	4.269		A
RADIO.a GROSS ALPHA	1:	1	1.800	0.000				
	2:	100	3.480	3.130				
RADIO.b RADIUM	1:	0	0.000	0.000				
	2:	22	0.170	1.830				
RADIO.c GROSS BETA	1:	1	17.000	0.000				
	2:	29	12.700	2.800				
SELENIUM	1:	1	0.010	0.000				
	2:	142	0.010	1.210				
SILICON DIOXIDE	1:	9	17.130	1.876	t...	1.844	1.975	A
	2:	142	25.600	2.020	F...	1.249	3.379	A
					t'..	2.284		A
SILVER	1:	0	0.000	0.000				
	2:	104	0.011	2.060				
SODIUM	1:	9	236.866	1.212	t...	1.638	1.975	A
	2:	144	212.000	1.300	F...	1.862	3.378	A
					t'..	2.275		A
SOLIDS, TOT. DISS.	1:	1	888.001	0.000				
	2:	144	905.000	1.280				
STRONTIUM	1:	1	0.300	0.000				
	2:	20	2.873	2.890				
SULFATE	1:	9	344.646	1.113	t...	1.181	1.975	A
	2:	142	325.000	1.510	F...	14.818	3.379	r
					t'..	2.156		A
SULFIDE	1:	1	0.200	0.000				
	2:	40	0.630	5.550				
TEMPERATURE	1:	8	13.300	2.595	t...	1.160	1.975	A
	2:	143	13.222	2.012	F...	1.484	2.279	A
					t'..	2.354		A
VANADIUM	1:	0	0.000	0.000				
	2:	1	0.000	0.000				
ZINC	1:	1	0.200	0.000				
	2:	144	0.243	2.970				

*** Statistical Tests ***

Data Set 1: GS-M2 ('79)
Data Set 2: Baseline Upper QS Aquifer

		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
ALKALINITY	1:	6	436.885	1.143	t...	1.140	1.975	A
	2:	144	408.000	1.350	F...	5.042	4.890	r
					t'..	2.482		A
ALUMINUM	1:	2	0.100	1.000	t...	2.601	2.034	r
	2:	34	0.145	2.300	F...	0.000	4.890	r
					t'..	2.036		r
AMMONIA	1:	1	1.300	0.000				
	2:	121	0.300	2.310				
ARSENIC	1:	2	0.022	3.121	t...	0.980	1.976	A
	2:	142	0.010	1.200	F...	38.970	3.780	r
					t'..	12.704		A
BARIUM	1:	0	0.000	0.000				
	2:	105	0.980	1.250				
BERYLLIUM	1:	0	0.000	0.000				
	2:	1	0.010	0.000				
BICARBONATE	1:	4	430.435	1.571	t...	0.497	1.976	A
	2:	144	482.000	1.430	F...	1.595	2.870	A
					t'..	3.166		A
BORON	1:	2	0.100	1.000	t...	12.250	1.976	r
	2:	144	0.331	3.230	F...	0.000	2.870	r
					t'..	1.976		r
BROMIDE	1:	1	0.100	0.000				
	2:	37	0.070	2.610				
CADMIUM	1:	2	0.010	1.000	t...	0.000	1.977	A
	2:	140	0.010	1.390	F...	0.000	2.870	r
					t'..	1.977		A
CALCIUM	1:	7	23.174	3.514	t...	0.840	1.975	A
	2:	144	34.800	3.070	F...	1.255	2.370	A
					t'..	2.432		A
CARBONATE	1:	4	8.858	24.265	t...	1.413	1.976	A
	2:	144	0.880	73.940	F...	1.821	8.300	A
					t'..	3.138		A
CHLORIDE	1:	7	13.837	2.898	t...	0.342	1.975	A
	2:	144	12.040	2.000	F...	2.356	2.370	A
					t'..	2.439		A
CHROMIUM	1:	2	0.010	1.000	t...	4.702	1.976	r
	2:	143	0.012	1.590	F...	0.000	2.370	r
					t'..	1.976		r

COD	1:	2	10.000	2.665	t...	0.776	2.023	A
	2:	39	17.700	4.790	F...	2.486	39.469	A
					t ..	12.050		A
COLIFORM, FECAL	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
COLIFORM, TOTAL	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
CONDUCTANCE, SPEC.	1:	6	1574.340	1.243	t...	2.394	1.975	r
	2:	144	1267.000	1.250	F...	1.052	4.890	A
					t ..	2.550		A
COPPER	1:	0	0.000	0.000				
	2:	144	0.074	2.410				
CYANIDE	1:	2	0.010	1.000	t...	0.000	1.977	A
	2:	141	0.010	1.310	F...	0.000	4.890	r
					t ..	1.977		A
FLUORIDE	1:	7	0.199	2.754	t...	1.812	1.975	A
	2:	144	0.410	3.840	F...	1.764	4.188	A
					t ..	2.415		A
HARDNESS, TOTAL	1:	0	0.000	0.000				
	2:	124	328.000	1.940				
HYDROXIDE	1:	1	94.000	0.000				
	2:	0	0.000	0.000				
IRON	1:	2	0.050	1.000	t...	38.859	1.976	r
	2:	144	5.016	4.150	F...	0.000	4.188	r
					t ..	1.976		r
KJELDAHL N	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
LEAD	1:	2	0.017	2.175	t...	4.095	1.976	r
	2:	144	0.173	5.270	F...	4.575	39.492	A
					t ..	12.373		A
LITHIUM	1:	0	0.000	0.000				
	2:	39	0.120	1.940				
MAGNESIUM	1:	7	82.396	2.221	t...	1.535	1.975	A
	2:	144	51.500	1.890	F...	1.571	2.370	A
					t ..	2.435		A
MANGANESE	1:	0	0.000	0.000				
	2:	144	0.141	2.370				
MBAS	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
MERCURY	1:	2	0.001	1.000	t...	16.270	1.976	r
	2:	144	0.004	2.730	F...	0.000	2.370	r
					t ..	1.976		r
MOLYBDENUM	1:	0	0.000	0.000				
	2:	20	0.130	2.340				
NICKEL	1:	1	0.010	0.000				
	2:	104	0.012	1.670				

NITRATE	1:	1	2.300	0.000				
	2:	125	0.210	2.590				
NITRITE-N	1:	2	0.032	5.095	t...	0.648	2.025	A
	2:	38	0.070	3.920	F...	1.421	4.076	A
					t'..	12.507		A
NITROGEN, AMMONIA	1:	1	0.700	0.000				
	2:	19	0.510	2.030				
ORG. CARBON, DISS.	1:	2	3.464	2.175	t...	1.627	1.979	A
	2:	128	8.500	1.750	F...	1.928	3.793	A
					t'..	12.662		A
PH	1:	7	7.929	0.427	t...	6.913	1.976	r
	2:	140	6.780	0.470	F...	1.217	4.190	A
					t ..	2.424		r
PHENOLS	1:	2	0.006	13.578	t...	0.373	2.023	A
	2:	39	0.003	4.620	F...	2.905	4.063	A
					t'..	12.610		A
PHOSPHATE	1:	2	0.100	1.000				
	2:	0	0.000	0.000				
PHOSPHATE, ORTHO	1:	0	0.000	0.000				
	2:	142	0.100	1.210				
POTASSIUM	1:	2	2.700	1.000	t...	1.900	2.023	A
	2:	39	2.190	1.990	F...	0.000	4.063	r
					t'..	2.025		A
RADIO.a GROSS ALPHA	1:	1	1.600	0.000				
	2:	100	3.480	3.180				
RADIO.b RADIUM	1:	0	0.000	0.000				
	2:	22	0.170	1.830				
RADIO.. GROSS BETA	1:	0	0.000	0.000				
	2:	29	12.700	2.800				
SELENIUM	1:	2	0.010	1.000	t...	0.000	1.976	A
	2:	142	0.010	1.210	F...	0.000	4.063	r
					t'..	1.977		A
SILICON DIOXIDE	1:	7	7.843	3.519	t...	2.462	1.976	r
	2:	142	25.600	2.020	F...	3.202	2.372	r
					t ..	2.441		r
SILVER	1:	0	0.000	0.000				
	2:	104	0.011	2.060				
SODIUM	1:	7	221.763	1.284	t...	0.462	1.975	A
	2:	144	212.000	1.300	F...	1.088	4.188	A
					t ..	2.474		A
SOLIDS, TOT. DISS.	1:	2	1255.747	1.050	t...	8.155	1.974	r
	2:	144	905.000	1.260	F...	25.700	39.427	A
					t ..	11.077		A
STRONTIUM	1:	2	1.132	2.425	t...	1.414	2.024	A
	2:	20	2.693	2.690	F...	1.435	2.450	A
					t ..	11.941		A
SULFATE	1:	7	474.705	1.555	t...	2.223	1.976	r
	2:	142	325.000	1.510	F...	1.149	2.372	A

					t' ..	2.430		A
SULFIDE	1:	2	0.200	1.000	t...	4.234	2.021	r
	2:	40	0.630	5.550	F...	0.000	2.372	r
					t'..	2.023		r
TEMPERATURE	1:	7	10.657	2.079	t...	1.947	1.975	A
	2:	143	12.222	2.022	F...	1.057	2.371	A
					t'..	2.429		A
VANADIUM	1:	0	0.000	0.000				
	2:	1	0.000	0.000				
ZINC	1:	2	0.100	1.000	t...	10.660	1.976	r
	2:	144	0.263	2.970	F...	0.000	2.371	r
					t' ..	1.976		r

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Statistical Tests

Data Set 1: GS-M3 ('79)
Data Set 2: Baseline Upper OS Aquifer

		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
ALKALINITY	1:	6	397.944	1.096	t...	0.554	1.975	A
	2:	144	408.000	1.350	F...	10.718	4.890	r
					t'..	2.409		A
ALUMINUM	1:	2	0.469	1.253	t...	5.483	2.034	r
	2:	34	0.145	2.300	F...	13.638	39.464	A
					t'..	9.586		A
AMMONIA	1:	1	0.140	0.000				
	2:	121	0.300	2.310				
ARSENIC	1:	2	0.010	1.000	t...	0.000	1.976	A
	2:	142	0.010	1.200	F...	0.000	39.464	r
					t'..	1.977		A
BARIUM	1:	0	0.000	0.000				
	2:	105	0.980	1.250				
BERYLLIUM	1:	0	0.000	0.000				
	2:	1	0.010	0.000				
BICARBONATE	1:	3	360.138	1.258	t...	2.146	1.976	r
	2:	144	482.000	1.430	F...	2.428	13.940	A
					t'..	4.227		A
BORON	1:	2	0.190	1.077	t...	5.006	1.976	r
	2:	144	0.331	3.230	F...	249.831	39.492	r
					t'..	5.882		A
BROMIDE	1:	2	0.122	1.332	t...	2.163	2.027	r
	2:	37	0.070	2.410	F...	11.198	39.467	A
					t'..	10.173		A
CADMIUM	1:	2	0.010	1.000	t...	0.000	1.977	A
	2:	140	0.010	1.390	F...	0.000	39.467	r
					t'..	1.977		A
CALCIUM	1:	7	10.620	1.564	t...	6.121	1.975	r
	2:	144	34.800	3.070	F...	6.254	4.198	r
					t'..	2.349		r
CARBONATE	1:	4	107.738	1.345	t...	12.437	1.976	r
	2:	144	0.000	74.240	F...	210.792	8.300	r
					t'..	2.199		r
CHLORIDE	1:	7	13.278	1.475	t...	.053	1.975	r
	2:	144	12.040	2.000	F...	1.806	4.198	A
					t'..	2.414		A
CHROMIUM	1:	2	0.010	1.000	t...	4.702	1.976	r
	2:	143	0.012	1.590	F...	0.000	4.189	r

					t ..	1.976		r
COD	1:	2	7.583	4.803	t...	0.746	2.023	A
	2:	39	17.700	4.690	F...	1.031	4.063	A
					t ..	12.440		A
COLIFORM, FECAL	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
COLIFORM, TOTAL	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
CONDUCTANCE, SPEC.	1:	4	1521.341	1.046	t...	6.270	1.976	r
	2:	144	1267.000	1.050	F...	24.618	8.300	r
					t ..	2.771		r
COPPER	1:	0	0.000	0.000				
	2:	144	0.074	2.410				
CYANIDE	1:	2	0.010	1.000	t...	0.000	1.977	A
	2:	141	0.010	1.310	F...	0.000	8.300	r
					t ..	1.977		A
FLUORIDE	1:	7	1.198	2.583	t...	2.853	1.975	r
	2:	144	0.410	3.940	F...	2.016	4.188	A
					t ..	2.410		r
HARDNESS, TOTAL	1:	0	0.000	0.000				
	2:	134	328.000	1.940				
HYDROXIDE	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
IRON	1:	2	0.067	1.515	t...	13.624	1.976	r
	2:	144	5.016	4.150	F...	11.736	39.492	A
					t ..	11.892		r
KJELDAHL N	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
LEAD	1:	2	0.017	2.175	t...	4.095	1.976	r
	2:	144	0.173	5.270	F...	4.525	33.492	A
					t ..	17.373		A
LITHIUM	1:	0	0.000	0.000				
	2:	39	0.130	1.940				
MAGNESIUM	1:	7	44.227	1.313	t...	2.172	1.975	r
	2:	144	51.500	1.890	F...	5.465	4.188	r
					t ..	2.359		A
MANGANESE	1:	0	0.000	0.000				
	2:	144	0.131	2.370				
MBAS	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
MERCURY	1:	2	0.001	1.000	t...	16.270	1.976	r
	2:	144	0.004	2.730	F...	0.000	4.188	r
					t ..	1.976		r
MOLYBDENUM	1:	0	0.000	0.000				
	2:	20	0.130	2.340				
NICKEL	1:	1	0.010	0.000				
	2:	104	0.019	1.470				

NITRATE	1:	2	0.307	1.830	t...	0.872	1.979	A
	2:	125	0.210	2.590	F...	2.480	39.490	A
					t ..	12.496		A
NITRITE-N	1:	1	0.010	0.000				
	2:	38	0.070	3.920				
NITROGEN, AMMONIA	1:	2	0.118	1.269	t...	6.255	2.093	r
	2:	19	0.510	2.030	F...	8.833	39.446	A
					t ..	9.215		A
ORG. CARBON, DISS.	1:	2	7.797	2.764	t...	0.120	1.979	A
	2:	128	8.500	1.750	F...	3.301	3.793	A
					t ..	12.680		A
PH	1:	6	8.283	0.436	t...	8.241	1.976	r
	2:	140	6.780	0.476	F...	1.162	4.892	A
					t'..	2.547		r
PHENOLS	1:	2	0.001	1.000	t...	4.483	2.023	r
	2:	39	0.003	4.670	F...	0.000	4.892	r
					t'..	2.025		r
PHOSPHATE	1:	2	0.100	1.000				
	2:	0	0.000	0.000				
PHOSPHATE, ORTHO	1:	0	0.000	0.000				
	2:	142	0.100	1.210				
POTASSIUM	1:	3	1.985	1.163	t...	0.699	2.021	A
	2:	39	2.190	1.990	F...	20.767	14.044	r
					t'..	3.113		A
RADIO.a GROSS ALPHA	1:	0	0.000	0.000				
	2:	100	3.480	3.180				
RADIO.b RADIUM	1:	0	0.000	0.000				
	2:	22	0.170	1.830				
RADIO.c GROSS BETA	1:	1	20.000	0.000				
	2:	29	12.700	2.800				
SELENIUM	1:	2	0.010	1.000	t...	0.000	1.976	A
	2:	142	0.010	1.210	F...	0.000	14.044	r
					t ..	1.977		A
SILICON DIOXIDE	1:	7	4.602	2.484	t...	4.914	1.976	r
	2:	142	25.600	2.020	F...	1.678	2.372	A
					t ..	2.485		r
SILVER	1:	1	0.010	0.000				
	2:	104	0.011	2.060				
SODIUM	1:	7	260.533	1.169	t...	3.275	1.979	r
	2:	144	212.000	1.300	F...	2.833	4.188	A
					t ..	2.197		r
SOLIDS, TOT. DISS.	1:	7	947.239	1.058	t...	1.017	1.976	A
	2:	144	905.000	1.280	F...	12.171	3.492	A
					t ..	11.438		A
STRONTIUM	1:	7	2.062	1.314	t...	1.107	2.086	A
	2:	20	2.893	2.890	F...	15.103	9.450	A
					t ..	8.006		A

SULFATE	1:	7	393.274	1.317	t...	1.854	1.976	A
	2:	142	325.000	1.510	F...	2.240	4.189	A
					t'..	2.406		A
SULFIDE	1:	2	0.045	3.121	t...	3.103	2.021	r
	2:	40	0.630	5.550	F...	2.247	39.470	A
					t'..	12.119		A
TEMPERATURE	1:	7	10.157	1.344	t...	3.857	1.975	r
	2:	143	12.222	2.022	F...	2.263	4.188	A
					t'..	2.406		r
VANADIUM	1:	0	0.000	0.000				
	2:	1	0.000	0.000				
ZINC	1:	2	0.245	2.743	t...	0.099	1.976	A
	2:	144	0.263	2.970	F...	1.144	39.492	A
					t'..	12.619		A

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*** Statistical Tests ***

Data Set 1: GS-M4 (79)
Data Set 2: Baseline Upper OS Aquifer

		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
ALKALINITY	1:	9	529.602	1.037	t...	6.975	1.975	r
	2:	144	408.000	1.350	F...	12.942	3.378	r
					t'..	2.167		r
ALUMINUM	1:	2	0.100	1.000	t...	2.601	2.034	r
	2:	34	0.145	2.300	F...	0.000	3.378	r
					t'..	2.036		r
AMMONIA	1:	1	0.100	0.000				
	2:	121	0.300	2.310				
ARSENIC	1:	2	0.022	3.121	t...	0.980	1.976	A
	2:	142	0.010	1.200	F...	38.970	3.780	r
					t'..	12.704		A
BARIUM	1:	0	0.000	0.000				
	2:	105	0.980	1.250				
BERYLLIUM	1:	0	0.000	0.000				
	2:	1	0.010	0.000				
BICARBONATE	1:	6	675.101	1.053	t...	9.228	1.975	r
	2:	144	482.000	1.430	F...	47.968	4.890	r
					t'..	2.198		r
BORON	1:	4	0.162	1.638	t...	2.692	1.976	r
	2:	144	0.331	3.230	F...	5.645	8.300	A
					t'..	3.054		A
BROMIDE	1:	1	0.100	0.000				
	2:	37	0.070	2.610				
CADMIUM	1:	2	0.010	1.000	t...	0.000	1.977	A
	2:	140	0.010	1.390	F...	0.000	8.300	r
					t'..	1.977		A
CALCIUM	1:	9	93.185	1.497	t...	6.014	1.975	r
	2:	144	34.800	3.070	F...	7.729	3.378	r
					t'..	2.206		r
CARBONATE	1:	4	0.278	7.746	t...	1.062	1.976	A
	2:	144	0.880	73.940	F...	4.419	8.300	A
					t'..	3.030		A
CHLORIDE	1:	9	16.506	1.730	t...	1.646	1.975	A
	2:	144	12.040	1.000	F...	1.[illegible]	3.378	A
					t'..	2.279		A
CHROMIUM	1:	2	0.010	1.000	t...	4.702	1.976	r
	2:	143	0.012	1.590	F...	0.000	3.378	r
					t'..	1.976		r

COD	1:	2	10.954	2.343	t...	0.737	2.023	A
	2:	39	17.700	4.490	F...	3.295	39.469	A
					t'..	11.854		A
COLIFORM, FECAL	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
COLIFORM, TOTAL	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
CONDUCTANCE, SPEC.	1:	3	2232.842	1.026	t...	23.830	1.976	r
	2:	144	1267.000	1.256	F...	75.577	13.940	r
					t ..	3.107		r
COPPER	1:	0	0.000	0.000				
	2:	144	0.074	2.410				
CYANIDE	1:	2	0.010	1.000	t...	0.000	1.977	A
	2:	141	0.010	1.310	F...	0.000	13.940	r
					t ..	1.977		A
FLUORIDE	1:	9	0.174	1.512	t...	4.824	1.975	r
	2:	144	0.410	3.840	F...	10.591	3.378	r
					t ..	2.183		r
HARDNESS, TOTAL	1:	0	0.000	0.000				
	2:	124	378.000	1.940				
HYDROXIDE	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
IRON	1:	4	0.162	6.437	t...	3.658	1.976	r
	2:	144	5.014	4.150	F...	1.712	2.870	A
					t'..	3.147		r
KJELDAHL N	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
LEAD	1:	2	0.020	2.665	t...	3.053	1.976	r
	2:	144	0.173	5.270	F...	2.875	39.492	A
					t ..	12.495		A
LITHIUM	1:	0	0.000	0.000				
	2:	39	0.130	1.740				
MAGNESIUM	1:	9	116.895	1.142	t...	11.029	1.975	r
	2:	144	51.500	1.900	F...	16.620	3.378	r
					t'..	2.147		r
MANGANESE	1:	0	0.000	0.000				
	2:	144	0.131	2.870				
MBAS	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
MERCURY	1:	2	0.001	1.000	t...	17.270	1.977	r
	2:	144	0.004	2.750	F...	0.000	3.378	r
					t ..	1.976		r
MOLYBDENUM	1:	0	0.000	0.000				
	2:	20	0.130	2.340				
NICKEL	1:	1	0.010	0.000				
	2:	104	0.012	1.470				

NITRATE	1:	3	0.124	3.149	t...	0.789	1.979	A
	2:	125	0.210	2.590	F...	1.453	3.225	A
					t'..	4.277		A
NITRITE-N	1:	2	0.032	5.095	t...	0.668	2.025	A
	2:	38	0.070	3.920	F...	1.421	4.076	A
					t'..	12.507		A
NITROGEN, AMMONIA	1:	1	1.400	0.000				
	2:	19	0.510	2.030				
ORG. CARBON, DISS.	1:	2	8.000	2.665	t...	0.087	1.979	A
	2:	128	8.500	1.750	F...	3.068	3.793	A
					t'..	12.479		A
PH	1:	5	7.800	0.485	t...	4.626	1.976	r
	2:	140	6.780	0.470	F...	1.065	2.653	A
					t'..	2.755		r
PHENOLS	1:	2	0.003	5.095	t...	0.000	2.023	A
	2:	39	0.003	4.620	F...	1.132	4.063	A
					t'..	12.463		A
PHOSPHATE	1:	2	0.100	1.000				
	2:	0	0.000	0.000				
PHOSPHATE, ORTHO	1:	0	0.000	0.000				
	2:	142	0.100	1.210				
POTASSIUM	1:	4	2.060	1.679	t...	0.217	2.020	A
	2:	39	2.190	1.990	F...	1.763	8.415	A
					t'..	3.041		A
RADIO.a GROSS ALPHA	1:	0	0.000	0.000				
	2:	100	3.480	3.180				
RADIO.b RADIUM	1:	0	0.000	0.000				
	2:	22	0.170	1.830				
RADIO.c GROSS BETA	1:	0	0.000	0.000				
	2:	29	17.700	2.800				
SELENIUM	1:	2	0.010	1.000	t...	0.000	1.976	A
	2:	142	0.010	1.210	F...	0.000	8.415	r
					t'..	1.977		A
SILICON DIOXIDE	1:	9	16.234	6.829	t...	0.708	1.975	A
	2:	142	25.600	2.020	F...	7.466	2.200	r
					t'..	2.304		A
SILVER	1:	0	0.000	0.000				
	2:	104	0.011	2.060				
SODIUM	1:	9	143.264	4.757	t...	0.753	1.975	A
	2:	144	212.000	1.300	F...	35.337	2.198	r
					t'..	2.305		A
SOLIDS, TOT. DISS.	1:	2	1559.488	1.037	t...	16.534	1.976	r
	2:	144	905.000	1.280	F...	46.146	39.492	r
					t'..	10.087		r
STRONTIUM	1:	2	0.471	1.515	t...	3.870	2.086	r
	2:	30	2.893	2.890	F...	6.524	39.450	A
					t'..	9.223		A
SULFATE	1:	9	391.057	4.729	t...	0.354	1.975	A

	2:	142	325.000	1.510	F...	14.214	2.200	r
					t ..	2.305		A
SULFIDE	1:	2	0.200	1.000	t...	4.234	2.021	r
	2:	40	0.430	5.550	F...	0.000	2.200	r
					t ..	2.023		r
TEMPERATURE	1:	8	12.863	2.764	t...	0.646	1.975	A
	2:	143	12.222	2.022	F...	1.871	2.279	A
					t ..	2.355		A
VANADIUM	1:	0	0.000	0.000				
	2:	1	0.000	0.000				
ZINC	1:	2	0.179	2.274	t...	0.654	1.976	A
	2:	144	0.243	2.970	F...	1.752	39.492	A
					t ..	12.576		A

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*** Statistical Tests ***

Data Set 1: GS-15U ('79)
Data Set 2: Baseline Upper OS Aquifer

		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
ALKALINITY	1:	9	448.601	1.167	t...	1.658	1.975	A
	2:	144	408.000	1.350	F...	3.776	3.378	r
					t'..	2.248		A
ALUMINUM	1:	2	0.141	1.633	t...	0.075	2.034	A
	2:	34	0.145	2.300	F...	2.884	39.464	A
					t'..	11.848		A
AMMONIA	1:	0	0.000	0.000				
	2:	121	0.300	2.310				
ARSENIC	1:	2	0.022	3.121	t...	0.980	1.976	A
	2:	142	0.010	1.200	F...	38.970	3.780	r
					t'..	12.704		A
BARIUM	1:	0	0.000	0.000				
	2:	105	0.980	1.250				
BERYLLIUM	1:	0	0.000	0.000				
	2:	1	0.010	0.000				
BICARBONATE	1:	6	569.747	1.204	t...	2.054	1.975	r
	2:	144	482.000	1.430	F...	3.712	4.890	A
					t'..	2.503		A
BORON	1:	3	0.182	1.743	t...	1.784	1.976	A
	2:	144	0.331	3.230	F...	4.453	13.940	A
					t'..	4.167		A
BROMIDE	1:	2	0.100	1.000	t...	2.261	2.027	r
	2:	37	0.070	2.610	F...	0.000	13.940	r
					t'..	2.029		r
CADMIUM	1:	2	0.010	1.000	t...	0.000	1.977	A
	2:	140	0.010	1.390	F...	0.000	13.940	r
					t'..	1.977		A
CALCIUM	1:	9	82.819	1.539	t...	5.058	1.975	r
	2:	144	34.800	3.070	F...	6.769	3.378	r
					t'..	2.215		r
CARBONATE	1:	4	1.732	26.926	t...	0.402	1.976	A
	2:	144	0.880	73.940	F...	1.708	8.300	A
					t'..	3.140		A
CHLORIDE	1:	9	15.221	1.533	t...	1.818	1.975	A
	2:	144	12.040	2.000	F...	2.632	3.378	A
					t'..	2.274		A
CHROMIUM	1:	2	0.010	1.000	t...	4.702	1.976	r
	2:	143	0.012	1.590	F...	0.000	3.378	r

					t'..	1.974		r
COD	1:	2	20.000	1.000	t...	0.494	2.023	A
	2:	39	17.700	4.490	F...	0.600	3.378	r
					t ..	2.025		A
COLIFORM, FECAL	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
COLIFORM, TOTAL	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
CONDUCTANCE, SPEC.	1:	5	2007.459	1.141	t...	7.441	1.976	r
	2:	144	1267.000	1.250	F...	2.862	6.060	A
					t ..	2.717		r
COPPER	1:	0	0.000	0.000				
	2:	144	0.074	2.410				
CYANIDE	1:	2	0.010	1.000	t...	0.000	1.977	A
	2:	141	0.010	1.310	F...	0.000	6.060	r
					t ..	1.977		A
FLUORIDE	1:	9	0.608	2.041	t...	1.499	1.975	A
	2:	144	0.410	3.840	F...	3.557	3.378	r
					t ..	2.251		A
HARDNESS, TOTAL	1:	0	0.000	0.000				
	2:	124	328.000	1.940				
HYDROXIDE	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
IRON	1:	4	0.147	2.087	t...	9.133	1.976	r
	2:	144	5.016	4.150	F...	3.741	8.300	A
					t ..	3.094		r
KJELDAHL N	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
LEAD	1:	2	0.020	2.665	t...	3.053	1.976	r
	2:	144	0.173	5.270	F...	2.875	39.492	A
					t'..	12.495		A
LITHIUM	1:	1	2.000	0.000				
	2:	39	0.130	1.940				
MAGNESIUM	1:	9	145.255	1.184	t...	13.334	1.975	r
	2:	144	51.500	1.890	F...	13.926	3.378	r
					t'..	2.162		r
MANGANESE	1:	0	0.000	0.000				
	2:	144	0.131	2.370				
MBAS	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
MERCURY	1:	2	0.001	1.000	t...	16.270	1.976	r
	2:	144	0.004	2.780	F...	0.000	3.378	r
					t ..	1.974		r
MOLYBDENUM	1:	0	0.000	0.000				
	2:	20	0.130	2.340				
NICKEL	1:	1	0.010	0.000				

NITRATE	1:	4	0.148	10.418	t...	0.298	1.979	A
	2:	125	0.210	2.590	F...	6.064	2.886	r
					t'..	3.177		A
NITRITE-N	1:	1	0.010	0.000				
	2:	38	0.070	3.920				
NITROGEN, AMMONIA	1:	2	0.374	6.463	t...	0.233	2.093	A
	2:	19	0.510	2.030	F...	6.946	4.510	r
					t'..	12.622		A
ORG. CARBON, DISS.	1:	0	0.000	0.000				
	2:	128	8.500	1.750				
PH	1:	6	7.950	0.459	t...	6.108	1.976	r
	2:	140	6.780	0.470	F...	1.049	4.892	A
					t'..	2.549		r
PHENOLS	1:	2	0.004	8.317	t...	0.190	2.023	A
	2:	39	0.003	4.620	F...	1.916	4.063	A
					t'..	12.561		A
PHOSPHATE	1:	2	0.110	1.138				
	2:	0	0.000	0.000				
PHOSPHATE, ORTHO	1:	0	0.000	0.000				
	2:	142	0.100	1.210				
POTASSIUM	1:	4	2.280	1.899	t...	0.119	2.020	A
	2:	39	2.190	1.990	F...	1.151	8.415	A
					t'..	3.086		A
RADIO.a GROSS ALPHA	1:	0	0.000	0.000				
	2:	100	3.480	3.180				
RADIO.b RADIUM	1:	0	0.000	0.000				
	2:	22	0.170	1.830				
RADIO.c GROSS BETA	1:	1	44.000	0.000				
	2:	29	12.700	2.800				
SELENIUM	1:	2	0.010	1.000	t...	0.000	1.976	A
	2:	142	0.010	1.210	F...	0.000	8.415	r
					t'..	1.977		A
SILICON DIOXIDE	1:	9	23.653	1.354	t...	0.676	1.975	A
	2:	142	25.600	2.020	F...	5.382	3.379	r
					t'..	2.229		A
SILVER	1:	0	0.000	0.000				
	2:	104	0.011	2.060				
SODIUM	1:	9	250.523	1.241	t...	2.220	1.975	r
	2:	144	212.000	1.300	F...	1.476	3.378	A
					t'..	2.281		A
SOLIDS, TOT. DISS.	1:	2	1852.027	1.485	t...	2.554	1.976	r
	2:	144	905.000	1.280	F...	2.566	3.778	A
					t'..	12.477		A
STRONTIUM	1:	2	2.142	1.387	t...	0.907	2.086	A
	2:	20	2.893	2.890	F...	10.524	39.450	A
					t'..	8.923		A
SULFATE	1:	9	842.587	1.203	t...	13.484	1.975	r

	2:	147	325.000	1.510	F...	4.972	3.379	r
					t ..	2.233		r
SULFIDE	1:	2	0.249	1.343	t...	2.664	2.021	r
	2:	40	0.630	5.550	F...	30.625	39.470	A
					t ..	8.007		A
TEMPERATURE	1:	8	13.250	3.163	t...	0.909	1.975	A
	2:	143	12.227	2.022	F...	2.447	2.279	r
					t ..	2.357		A
VANADIUM	1:	0	0.000	0.000				
	2:	1	0.000	0.000				
ZINC	1:	2	0.045	3.121	t...	2.180	1.976	r
	2:	144	0.263	2.970	F...	1.693	3.778	A
					t ..	12.638		A

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*** Statistical Tests ***

Data Set 1: GS-15L ('79)
Data Set 2: Baseline Lower OS Aquifer

		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
ALKALINITY	1:	7	1001.138	1.498	t...	2.286	1.982	r
	2:	108	674.000	2.330	F...	4.381	4.210	r
					t ..	2.356		A
ALUMINUM	1:	2	0.173	2.175	t...	0.569	2.048	A
	2:	28	0.241	2.800	F...	1.756	39.460	A
					t ..	12.055		A
AMMONIA	1:	0	0.000	0.000				
	2:	89	0.590	2.450				
ARSENIC	1:	2	0.022	3.121	t...	0.980	1.985	A
	2:	106	0.010	1.010	F...	13083.606	3.830	r
					t ..	12.706		A
BARIUM	1:	0	0.000	0.000				
	2:	69	0.968	1.320				
BERYLLIUM	1:	0	0.000	0.000				
	2:	1	0.000	0.000				
BICARBONATE	1:	5	1307.255	1.630	t...	1.870	1.983	A
	2:	108	842.000	2.470	F...	3.425	6.080	A
					t'..	2.686		A
BORON	1:	3	0.952	1.724	t...	0.360	1.984	A
	2:	108	0.841	4.350	F...	7.286	13.958	A
					t ..	4.025		A
BROMIDE	1:	2	0.100	1.000	t...	5.040	2.034	r
	2:	34	0.050	2.230	F...	0.000	13.958	r
					t ..	2.034		r
CADMIUM	1:	2	0.010	1.000	t...	0.000	1.985	A
	2:	106	0.010	1.430	F...	0.000	13.958	r
					t'..	1.985		A
CALCIUM	1:	7	4.476	1.582	t...	3.569	1.982	r
	2:	108	8.800	2.210	F...	2.989	4.210	A
					t'..	2.381		r
CARBONATE	1:	5	38.144	3.544	t...	1.031	1.983	A
	2:	108	48.830	2.330	F...	2.239	2.494	A
					t'..	2.763		A
CHLORIDE	1:	7	16.386	3.467	t...	0.585	1.983	A
	2:	106	21.700	2.730	F...	1.533	2.418	A
					t'..	2.430		A
CHROMIUM	1:	2	0.010	1.000	t...	2.547	1.985	r
	2:	106	0.011	1.470	F...	0.000	2.418	r
					t ..	1.985		r

COD	1:	2	26.458	1.485	t...	2.054	2.025	r
	2:	38	12.900	3.650	F...	10.721	39.448	A
					t ..	10.307		A
COLIFORM, FECAL	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
COLIFORM, TOTAL	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
CONDUCTANCE, SPEC.	1:	5	2304.524	1.410	t...	2.798	1.983	r
	2:	108	1459.000	1.780	F...	2.816	6.080	A
					t ..	2.701		r
COPPER	1:	0	0.000	0.000				
	2:	108	0.088	1.760				
CYANIDE	1:	2	0.010	1.000	t...	0.000	1.985	A
	2:	105	0.010	1.240	F...	0.000	6.080	r
					t ..	1.985		A
FLUORIDE	1:	7	21.799	2.411	t...	1.119	1.982	A
	2:	108	14.690	3.380	F...	1.915	4.210	A
					t ..	2.402		A
HARDNESS, TOTAL	1:	0	0.000	0.000				
	2:	89	109.500	2.350				
HYDROXIDE	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
IRON	1:	4	0.031	3.456	t...	4.995	1.983	r
	2:	108	0.781	6.580	F...	2.308	8.320	A
					t ..	3.109		r
KJELDAHL N	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
LEAD	1:	2	0.014	1.633	t...	7.121	1.984	r
	2:	108	0.208	4.890	F...	10.474	39.488	A
					t ..	11.750		A
LITHIUM	1:	0	0.000	0.000				
	2:	38	0.126	1.630				
MAGNESIUM	1:	7	50.022	1.477	t...	5.301	1.982	r
	2:	108	20.000	2.560	F...	5.809	4.210	r
					t ..	7.333		r
MANGANESE	1:	0	0.000	0.000				
	2:	108	0.075	1.930				
MBAS	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
MERCURY	1:	2	0.001	1.000	t...	7.894	1.984	r
	2:	108	0.002	2.490	F...	0.000	4.210	r
					t ..	1.984		r
MOLYBDENUM	1:	0	0.000	0.000				
	2:	20	0.100	1.250				
NICKEL	1:	1	0.010	0.000				
	2:	71	0.023	2.280				

NITRATE	1:	4	0.029	10.128	t...	0.009	1.989	A
	2:	90	0.100	2.140	F...	9.261	2.950	r
					t ..	3.178		A
NITRITE-N	1:	1	0.010	0.000				
	2:	37	0.070	3.930				
NITROGEN, AMMONIA	1:	2	0.374	4.463	t...	0.866	2.101	A
	2:	18	1.180	1.770	F...	10.681	4.560	r
					t ..	12.648		A
ORG. CARBON, DISS.	1:	1	7.000	0.000				
	2:	100	10.500	1.580				
PH	1:	2	8.700	0.424	t...	5.074	1.984	r
	2:	107	7.140	0.480	F...	1.282	39.488	A
					t ..	12.578		A
PHENOLS	1:	2	0.005	11.079	t...	0.532	2.025	A
	2:	38	0.002	5.670	F...	1.921	4.076	A
					t ..	12.558		A
PHOSPHATE	1:	2	0.800	2.665				
	2:	0	0.000	0.000				
PHOSPHATE, ORTHO	1:	0	0.000	0.000				
	2:	106	0.110	1.440				
POTASSIUM	1:	4	3.699	1.623	t...	1.233	2.021	A
	2:	38	2.640	2.190	F...	2.620	8.470	A
					t ..	2.980		A
RADIO.a GROSS ALPHA	1:	0	0.000	0.000				
	2:	78	3.310	3.000				
RADIO.b RADIUM	1:	0	0.000	0.000				
	2:	23	0.310	2.060				
RADIO.c GROSS BETA	1:	1	73.000	0.000				
	2:	38	21.400	3.130				
SELENIUM	1:	2	0.010	1.000	t...	0.000	1.984	A
	2:	108	0.010	1.250	F...	0.000	8.420	r
					t ..	1.984		A
SILICON DIOXIDE	1:	7	4.988	2.138	t...	2.356	1.982	r
	2:	108	10.100	2.410	F...	1.340	4.210	A
					t ..	2.415		A
SILVER	1:	0	0.000	0.000				
	2:	46	0.009	1.400				
SODIUM	1:	7	539.269	1.416	t...	2.041	1.982	r
	2:	108	397.000	2.120	F...	4.447	4.210	r
					t ..	2.351		A
SOLIDS, TOT. DISS.	1:	2	1547.483	1.512	t...	1.259	1.984	A
	2:	108	1075.000	1.970	F...	2.690	24.458	A
					t ..	12.443		A
STRONTIUM	1:	2	0.158	1.212	t...	2.970	2.086	r
	2:	20	0.650	2.210	F...	1.497	2.450	A
					t ..	11.231		A
SULFATE	1:	7	257.085	1.496	t...	3.584	1.982	r
	2:	108	112.000	3.400	F...	5.366	4.210	r

					t'..	2.340		r
SULFIDE	1:	2	0.063	5.095	t...	1.843	2.025	A
	2:	38	0.560	3.970	F...	1.395	4.076	A
					t'..	12.503		A
TEMPERATURE	1:	4	12.125	2.175	t...	2.351	1.984	r
	2:	106	14.722	1.983	F...	1.203	2.918	A
					t'..	3.154		A
VANADIUM	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
ZINC	1:	2	0.071	1.633	t...	3.278	1.985	r
	2:	106	0.239	3.800	F...	7.410	39.488	A
					t'..	11.999		A

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APPENDIX 5-2.10

Deep Oil Shale Aquifer Water Quality
Comparison of Baseline and Report Period
Combined Statistical Analysis

Statistical Tests

Data Set 1: '79 Upper OS Aquifer
Data Set 2: Baseline Upper OS Aquifer

		Obs.	Mean	St. Dev.	Test	Calc. Value	Table Value	Accept /reject
ALKALINITY	1:	46	416.082	1.212	t...	0.519	1.969	A
	2:	144	408.000	1.350	F...	2.436	1.661	r
					t'..	1.999		A
ALUMINUM	1:	10	0.156	1.913	t...	0.293	2.019	A
	2:	34	0.145	2.300	F...	1.649	3.290	A
					t'..	2.192		A
AMMONIA	1:	4	0.207	3.444	t...	0.596	1.980	A
	2:	121	0.300	2.310	F...	2.182	2.889	A
					t'..	3.168		A
ARSENIC	1:	10	0.016	2.176	t...	1.908	1.975	A
	2:	142	0.010	1.200	F...	18.185	2.140	r
					t'..	2.261		A
BARIUM	1:	0	0.000	0.000				
	2:	105	0.980	1.250				
BERYLLIUM	1:	0	0.000	0.000				
	2:	1	0.010	0.000				
BICARBONATE	1:	27	490.234	1.347	t...	0.262	1.972	A
	2:	144	482.000	1.430	F...	1.442	1.914	A
					t'..	2.039		A
BORON	1:	15	0.130	1.705	t...	5.533	1.974	r
	2:	144	0.331	3.230	F...	4.829	2.448	r
					t'..	2.091		r
BROMIDE	1:	7	0.104	1.144	t...	2.469	2.019	r
	2:	37	0.070	2.610	F...	39.020	4.325	r
					t'..	2.085		r
CADMIUM	1:	10	0.010	1.000	t...	0.000	1.975	A
	2:	140	0.010	1.390	F...	0.000	4.325	r
					t'..	1.977		A
CALCIUM	1:	48	39.240	2.526	t...	0.736	1.968	A
	2:	144	34.800	3.070	F...	1.465	1.646	A
					t'..	2.001		A
CARBONATE	1:	24	4.333	17.413	t...	2.322	1.977	r
	2:	144	0.880	73.940	F...	2.250	1.996	r
					t'..	2.044		r
CHLORIDE	1:	48	15.017	1.769	t...	2.197	1.968	r
	2:	144	12.040	2.000	F...	1.477	1.646	A
					t'..	2.001		r
CHROMIUM	1:	10	0.010	1.000	t...	4.702	1.975	r

	2:	143	0.012	1.590	F...	0.000	1.646	r
					t ..	1.976		r
COD	1:	10	10.353	2.140	t...	1.391	2.014	A
	2:	39	17.700	4.690	F...	4.126	3.265	r
					t ..	2.145		A
COLIFORM, FECAL	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
COLIFORM, TOTAL	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
CONDUCTANCE, SPEC.	1:	28	1550.543	1.295	t...	3.863	1.972	r
	2:	144	1267.000	1.250	F...	1.342	1.689	A
					t ..	2.043		r
COPPER	1:	0	0.000	0.000				
	2:	144	0.074	2.410				
CYANIDE	1:	10	0.010	1.000	t...	0.000	1.975	A
	2:	141	0.010	1.310	F...	0.000	1.689	r
					t ..	1.977		A
FLUORIDE	1:	48	0.391	2.980	t...	0.245	1.968	A
	2:	144	0.410	3.840	F...	1.518	1.646	A
					t ..	2.001		A
HARDNESS, TOTAL	1:	0	0.000	0.000				
	2:	124	328.000	1.940				
HYDROXIDE	1:	2	3.066	126.567				
	2:	0	0.000	0.000				
IRON	1:	15	0.111	3.147	t...	11.951	1.974	r
	2:	144	5.014	4.150	F...	1.541	2.448	A
					t ..	2.123		r
KJELDAHL N	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
LEAD	1:	10	0.020	1.844	t...	9.067	1.975	r
	2:	144	0.173	5.270	F...	7.377	3.128	r
					t ..	2.171		r
LITHIUM	1:	1	2.000	0.000				
	2:	39	0.130	1.940				
MAGNESIUM	1:	48	74.917	1.846	t...	3.633	1.968	r
	2:	144	51.500	1.890	F...	1.078	1.646	A
					t ..	2.004		r
MANGANESE	1:	0	0.000	0.000				
	2:	144	0.131	2.370				
MBAS	1:	0	0.000	0.000				
	2:	0	0.000	0.000				
MERCURY	1:	10	0.001	1.000	t...	16.270	1.975	r
	2:	144	0.004	2.730	F...	0.000	1.646	r
					t ..	1.976		r
MOLYBDENUM	1:	0	0.000	0.000				
	2:	20	0.130	2.340				

	2:	104	0.019	1.670	F...	0.000	1.646	r
					t'..	1.986		r
NITRATE	1:	12	0.168	5.400	t...	0.452	1.978	A
	2:	125	0.210	2.590	F...	3.140	2.045	r
					t'..	2.195		A
NITRITE-N	1:	7	0.027	3.424	t...	1.849	2.018	A
	2:	38	0.070	3.920	F...	1.232	4.320	A
					t ..	2.377		A
NITROGEN, AMMONIA	1:	7	0.409	3.458	t...	0.445	2.064	A
	2:	19	0.510	2.030	F...	3.071	3.050	r
					t'..	2.413		A
ORG. CARBON, DISS.	1:	8	5.386	2.087	t...	1.723	1.978	A
	2:	128	8.500	1.750	F...	1.728	2.293	A
					t ..	2.353		A
PH	1:	37	7.927	0.436	t...	13.997	1.971	r
	2:	140	6.780	0.470	F...	1.162	1.752	A
					t'..	2.017		r
PHENOLS	1:	10	0.002	4.408	t...	0.766	2.014	A
	2:	39	0.003	4.620	F...	1.064	3.265	A
					t'..	2.214		A
PHOSPHATE	1:	10	0.102	1.059				
	2:	0	0.000	0.000				
PHOSPHATE, ORTHO	1:	0	0.000	0.000				
	2:	142	0.100	1.210				
POTASSIUM	1:	17	1.943	2.067	t...	0.576	2.006	A
	2:	39	2.190	1.990	F...	1.113	2.149	A
					t'..	2.094		A
RADIO.a GROSS ALPHA	1:	3	0.660	5.134	t...	1.747	1.986	A
	2:	100	3.480	3.180	F...	2.000	3.267	A
					t'..	4.280		A
RADIO.b RADIUM	1:	0	0.000	0.000				
	2:	22	0.170	1.830				
RADIO.c GROSS BETA	1:	4	14.555	3.101	t...	0.228	2.040	A
	2:	29	12.700	2.800	F...	1.208	3.270	A
					t ..	3.090		A
SELENIUM	1:	10	0.010	1.000	t...	0.000	1.975	A
	2:	142	0.010	1.210	F...	0.000	3.270	r
					t ..	1.977		A
SILICON DIOXIDE	1:	48	12.541	3.179	t...	4.040	1.969	r
	2:	142	25.600	2.020	F...	2.691	1.553	r
					t ..	3.010		r
SILVER	1:	1	0.010	0.000				
	2:	104	0.011	2.070				
SODIUM	1:	48	212.224	2.014	t...	0.010	1.968	A
	2:	144	212.000	1.300	t...	7.121	1.561	r
					t ..	3.012		A
SOLIDS, TOT. DISS.	1:	10	1230.935	1.415	t...	2.754	1.975	r
	2:	144	905.000	1.290	F...	1.977	2.138	A
					t'..	2.253		r

STRONTIUM	1:	10	1.220	2.145	t...	2.535	2.048	r
	2:	20	2.893	2.890	F...	1.888	3.420	A
					t ..	2.182		r
SULFATE	1:	48	417.661	2.229	t...	2.077	1.969	r
	2:	142	325.000	1.510	F...	3.783	1.553	r
					t ..	2.011		r
SULFIDE	1:	10	0.123	2.705	t...	3.934	2.013	r
	2:	40	0.630	5.550	F...	2.944	3.260	A
					t ..	2.145		r
TEMPERATURE	1:	45	11.769	2.700	t...	1.038	1.969	A
	2:	143	12.222	2.022	F...	1.783	1.565	r
					t ..	2.011		A
VANADIUM	1:	0	0.000	0.000				
	2:	1	0.000	0.000				
ZINC	1:	10	0.104	2.812	t...	2.734	1.975	r
	2:	144	0.263	2.970	F...	1.109	3.128	A
					t ..	2.243		r

****

$

APPENDIX 5-2.11

Deep Oil Shale Aquifer Water Quality
Special Study on Spatial and Temporal
Water Quality Variation

SPECIAL STUDY ON SPATIAL AND TEMPORAL WATER QUALITY DATA VARIATION

An analysis was conducted of various chemical constituent ratios to determine spatial and temporal variation in water quality data. Chemical data for CE-701, CE-704, CE-705A, G-S 10, G-S 15U, and AM-3 in the upper aquifer, and G-S 15L in the lower aquifer were investigated. Variations in both time and space were analyzed for relative concentration and for "aquifer signature ratios", which are ratios of key chemical species. The aquifer signature ratios are useful not only in determining the variations in water quality but also in establishing errors in chemical analyses. These ratios have been plotted for the six well study, in Figures through .

Upper Aquifer Spatial Variations

The water quality in G-S 10 and G-S 15 is significantly different from the water quality in the other four wells studied. Conductivity and major species concentration is generally high in these two wells, which are located in the southeastern portion of Tract C-a. Average conductivity in these two wells is almost double that in the other four wells study. Alkalinity, Sodium, Sulfate, Magnesium, and Calcium are all relatively high in G-S 10 and G-S 15. There does not appear to be considerable spacial variation in Silica. Fluoride is high in AM-3, which is in the southwestern portion of the Tract. Chloride is high in CE-701, while Alkalinity, Calcium, and Magnesium are relatively low. This is probably due to the treatment of the well, which was done in a futile attempt to increase injectivity. Aquifer signature ratios did not show any consistent distribution patterns, as opposed to the concentrations which did show definite spatial variation patterns.

Upper Aquifer Temporal Variations

The mean concentration of the six upper aquifer wells did not differ from the average baseline concentration. Most of the variation in species concentration is random with respect to time. Wells G-S 10 and G-S 15 show somewhat greater variation in data, as indicated by relatively high standard deviations. Data for CE-701 shows that a change in Alkalinity, Chloride, and Calcium at

mid year; Chloride went down and Calcium and Alkalinity increased. The reason for this abrupt change is not known.

Lower Aquifer Temporal Variation

Data from G-S 15 Lower showed changes in character that are attributed to the mixing of upper aquifer water with lower aquifer water when the coreholes were drilled. Aquifer signature ratios for this hole are plotted in Figures 5-159 and 5-160 and show the influence of upper aquifer water during February and July. The water that flowed from G-S 15 U into G-S 15 L when they were open core holes is still in the vicinity of the well in the lower aquifer, and it is being sampled occasionally.

Reasons for Data Variations

Two major causes of variation in chemical data have been identified as 1) natural variation of water quality in different zones of the aquifer, which could be mixed in the bailer during sampling and 2) problems in chemical analyses and data reporting. It has been observed that the standard deviation is typically plus or minus roughly 25 percent of the mean value for most parameters.

CE 701 • Conductivity

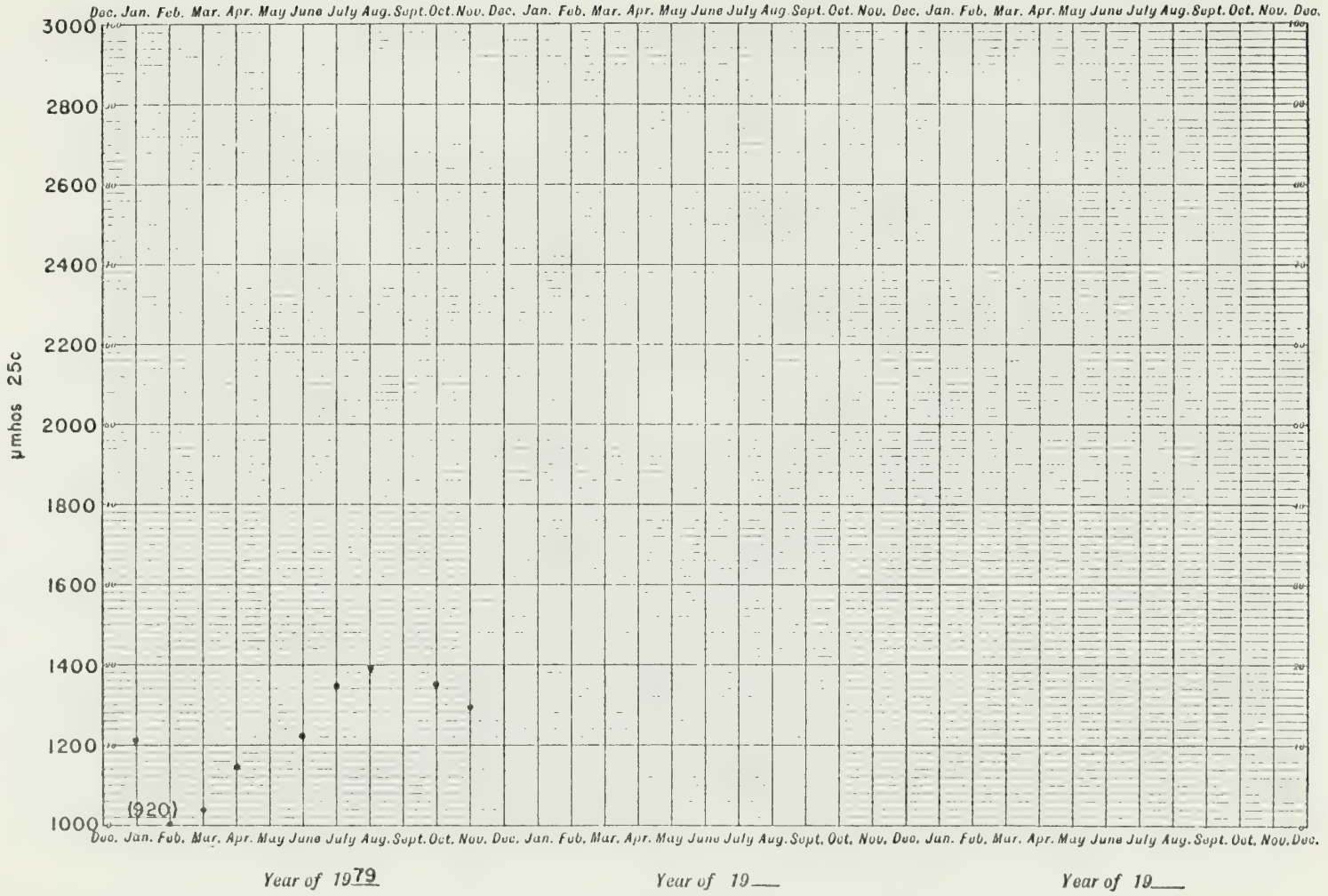

Figure 5-126.

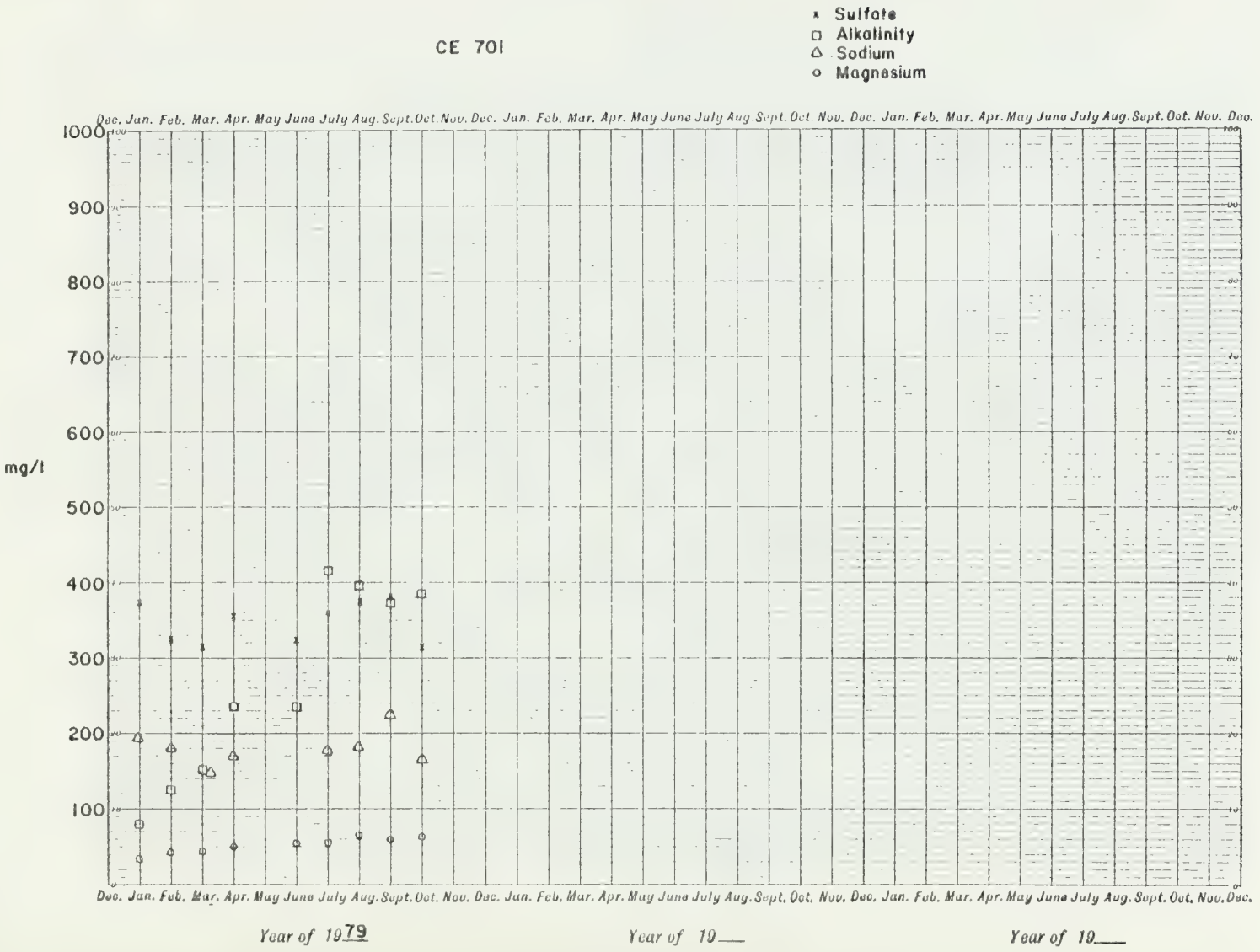
CE 701
x Sulfate
□ Alkalinity
△ Sodium
o Magnesium
mg/l
1000
900
800
700
600
500
400
300
200
100
0
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1979
Year of 19___
Year of 19___

Figure 5-127.

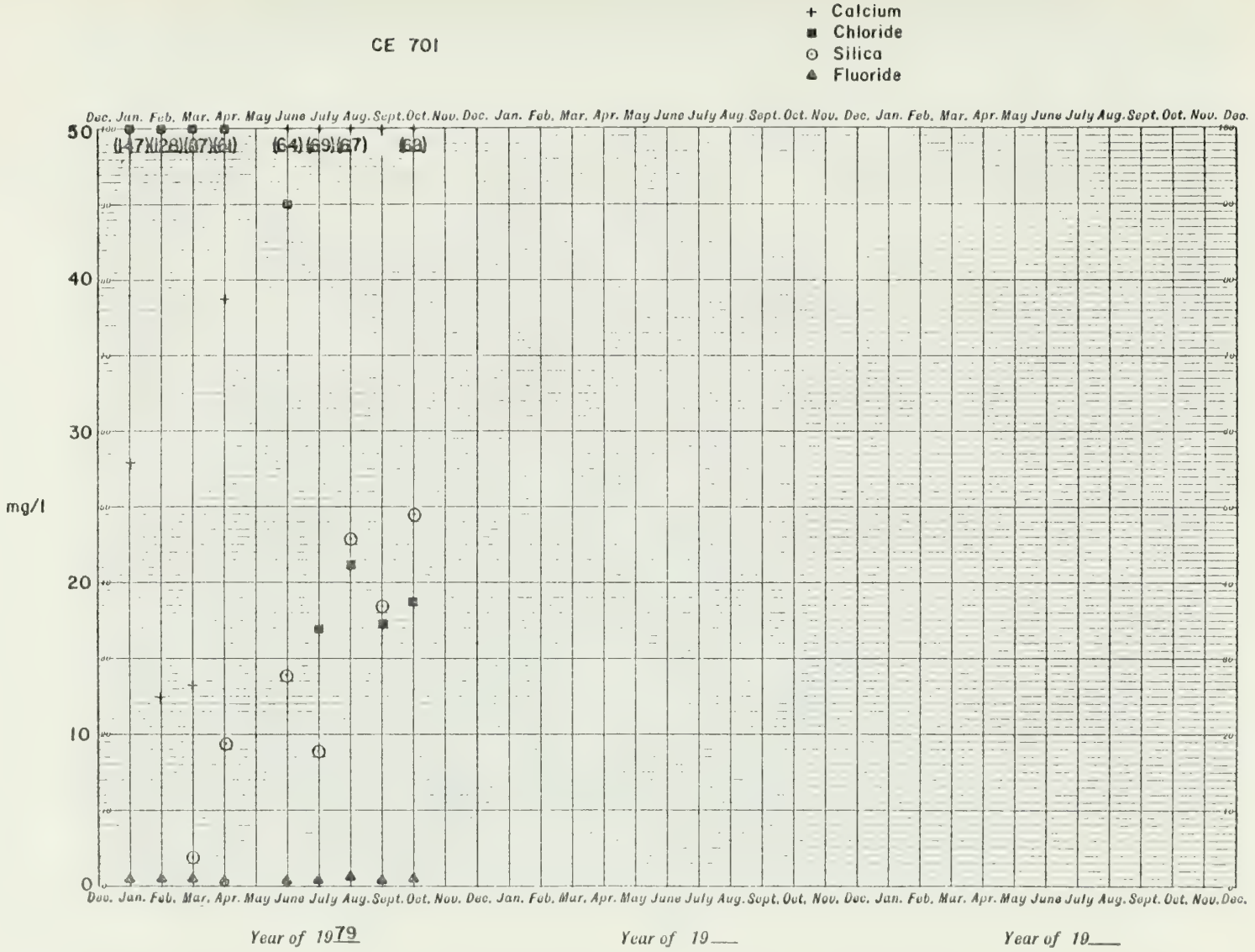
CE 701
+ Calcium
■ Chloride
⊙ Silica
▲ Fluoride
mg/l
50
40
30
20
10
0
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
(147)(128)(67)(61)
(64)(69)(67)
(68)
Year of 1979
Year of 19__
Year of 19__

Figure 5-128.

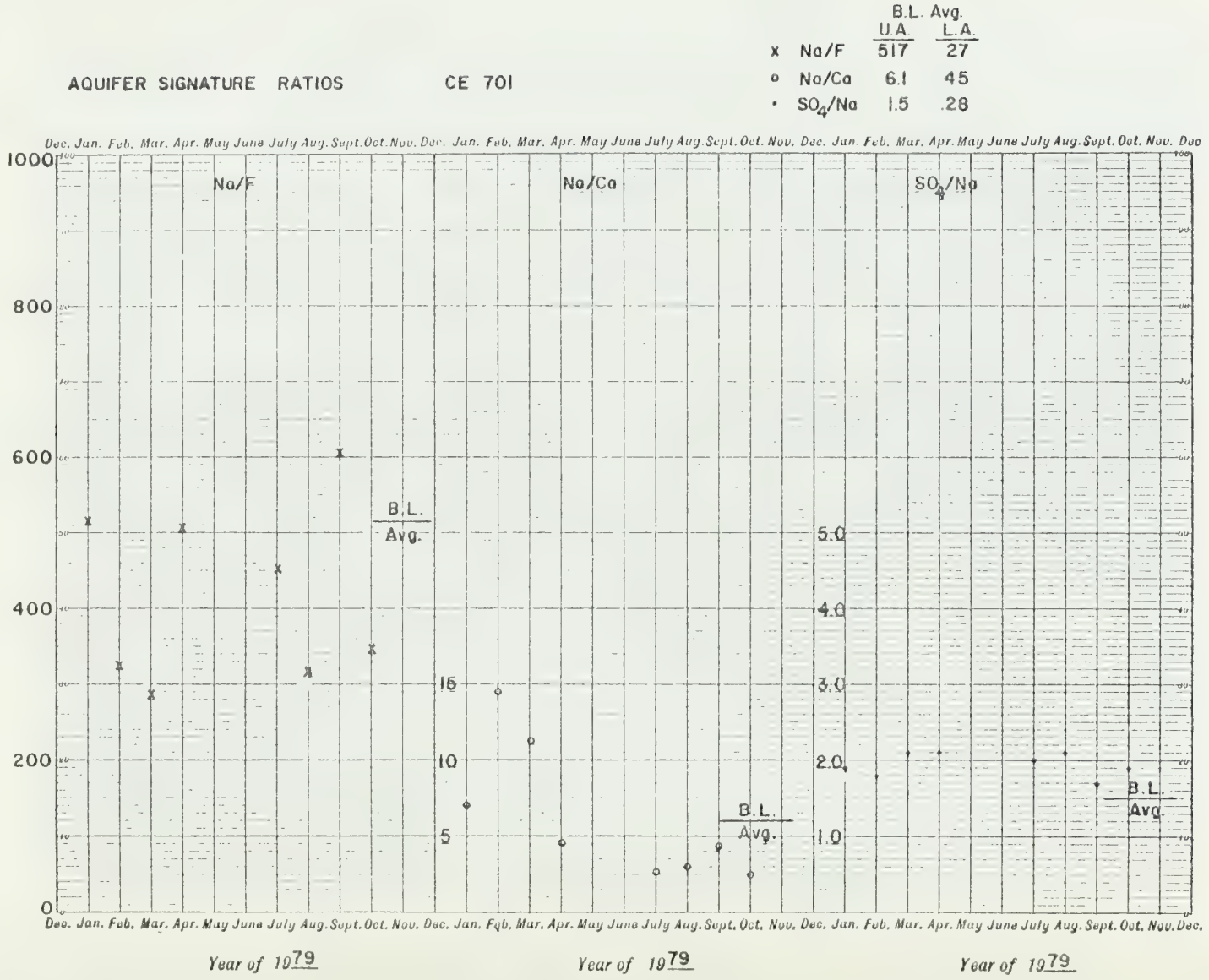
AQUIFER SIGNATURE RATIOS
CE 701
B.L. Avg.
U.A. L.A.
x Na/F 517 27
o Na/Ca 6.1 45
• SO4/Na 1.5 .28
Na/F
Na/Ca
SO4/Na
B.L. Avg.
B.L. Avg.
B.L. Avg.
1000
800
600
400
200
0
16
10
5
5.0
4.0
3.0
2.0
1.0
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1979
Year of 1979
Year of 1979

Figure 5-129.

AQUIFER SIGNATURE RATIOS CE 701

	B.L. Avg. U.A.	B.L. Avg. L.A.
□ Ca/Cl	2.9	.41
▲ Ca/SiO_2	1.4	.87

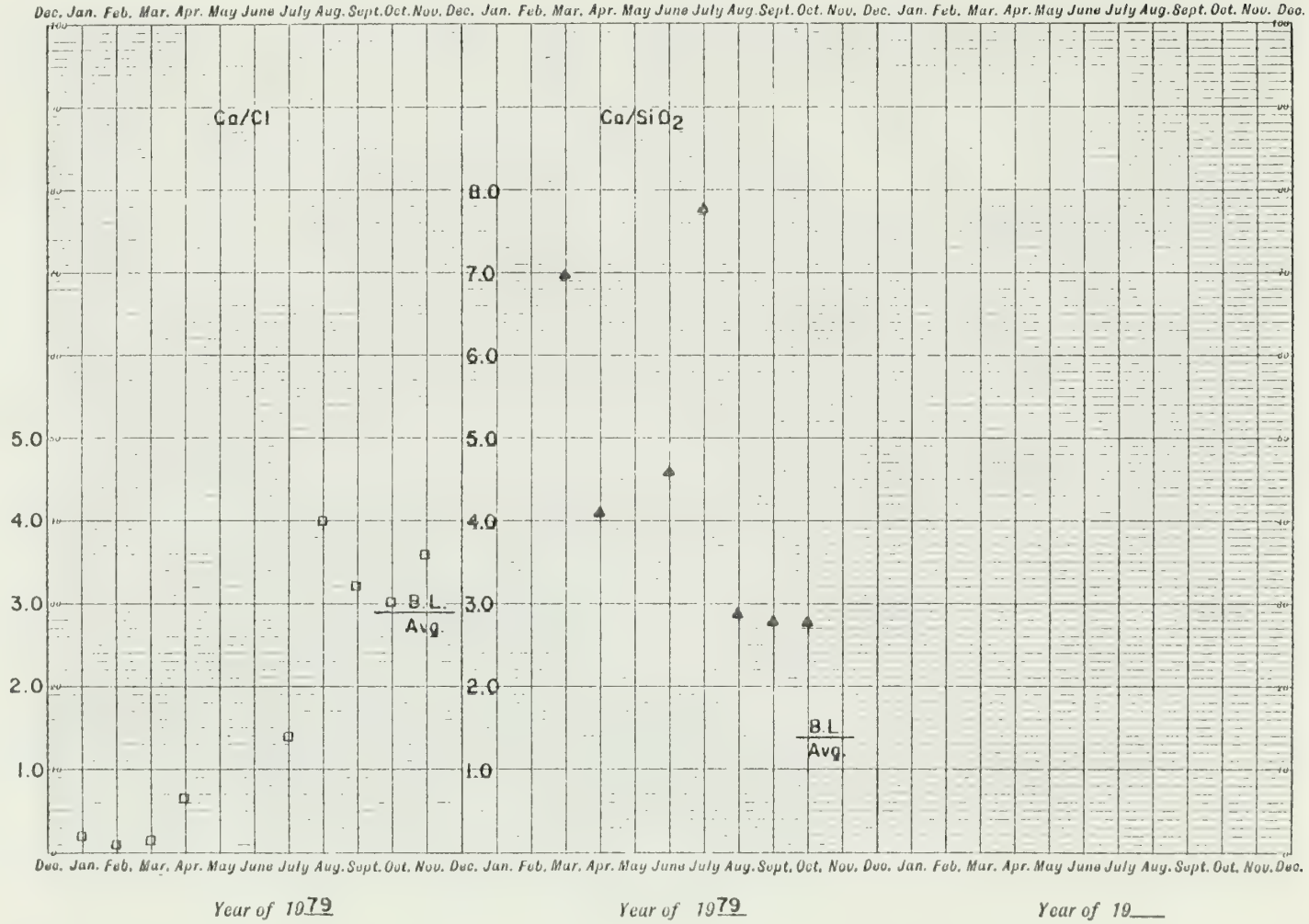

Figure 5-130.

CE 709

• Conductivity

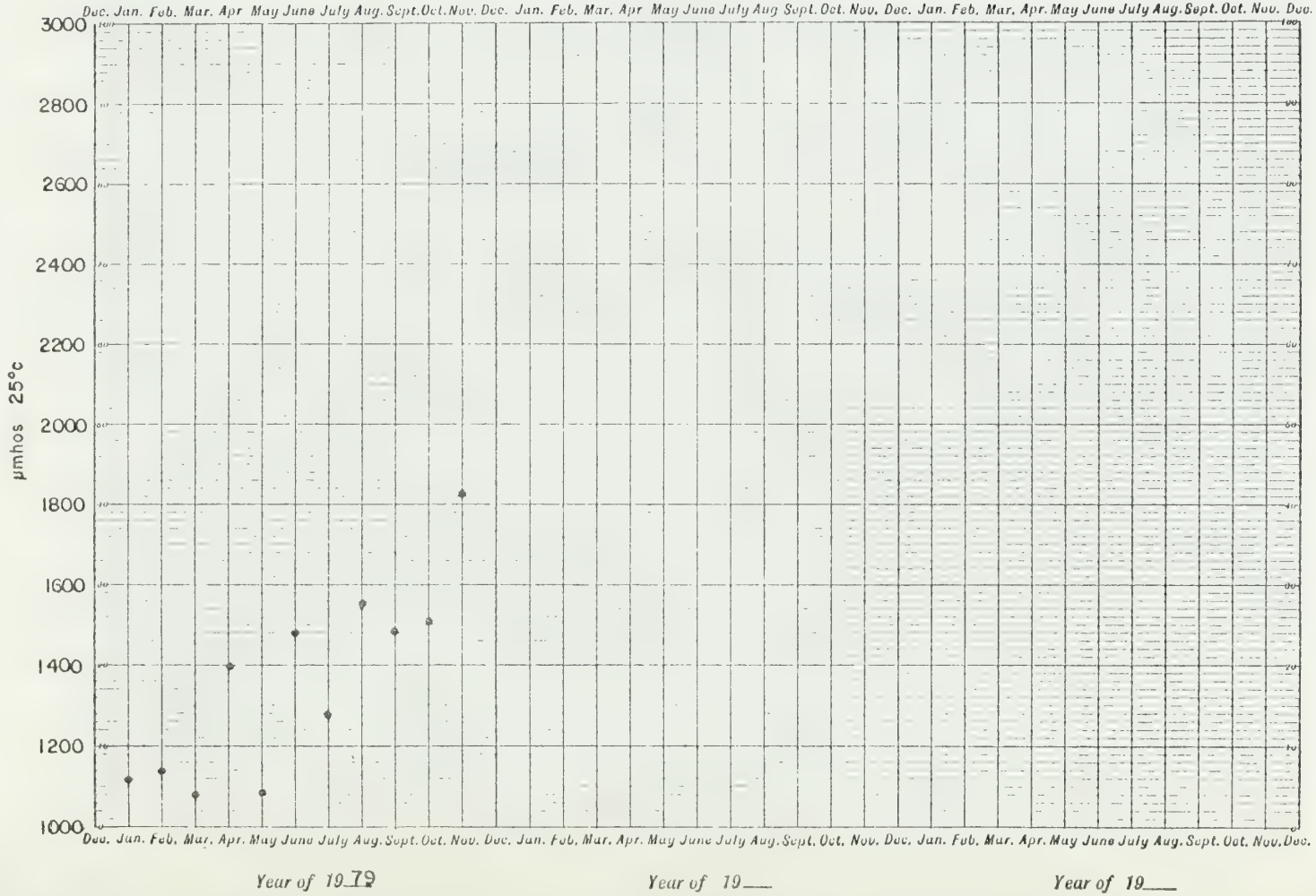

Figure 5-131.

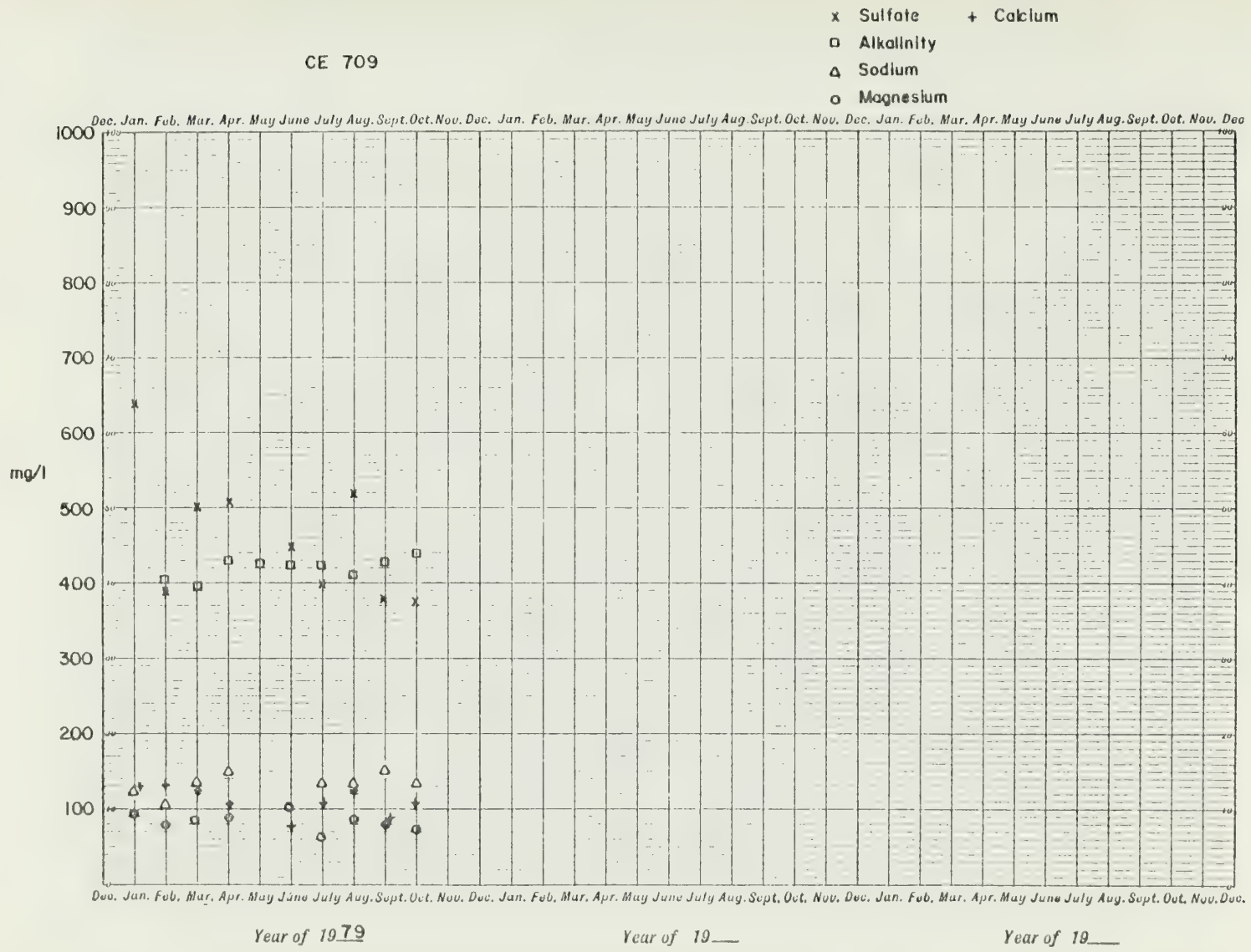
x Sulfate
+ Calcium
□ Alkalinity
△ Sodium
○ Magnesium
CE 709
mg/l
1000
900
800
700
600
500
400
300
200
100
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec
Year of 1979
Year of 19___
Year of 19___

Figure 5-132.

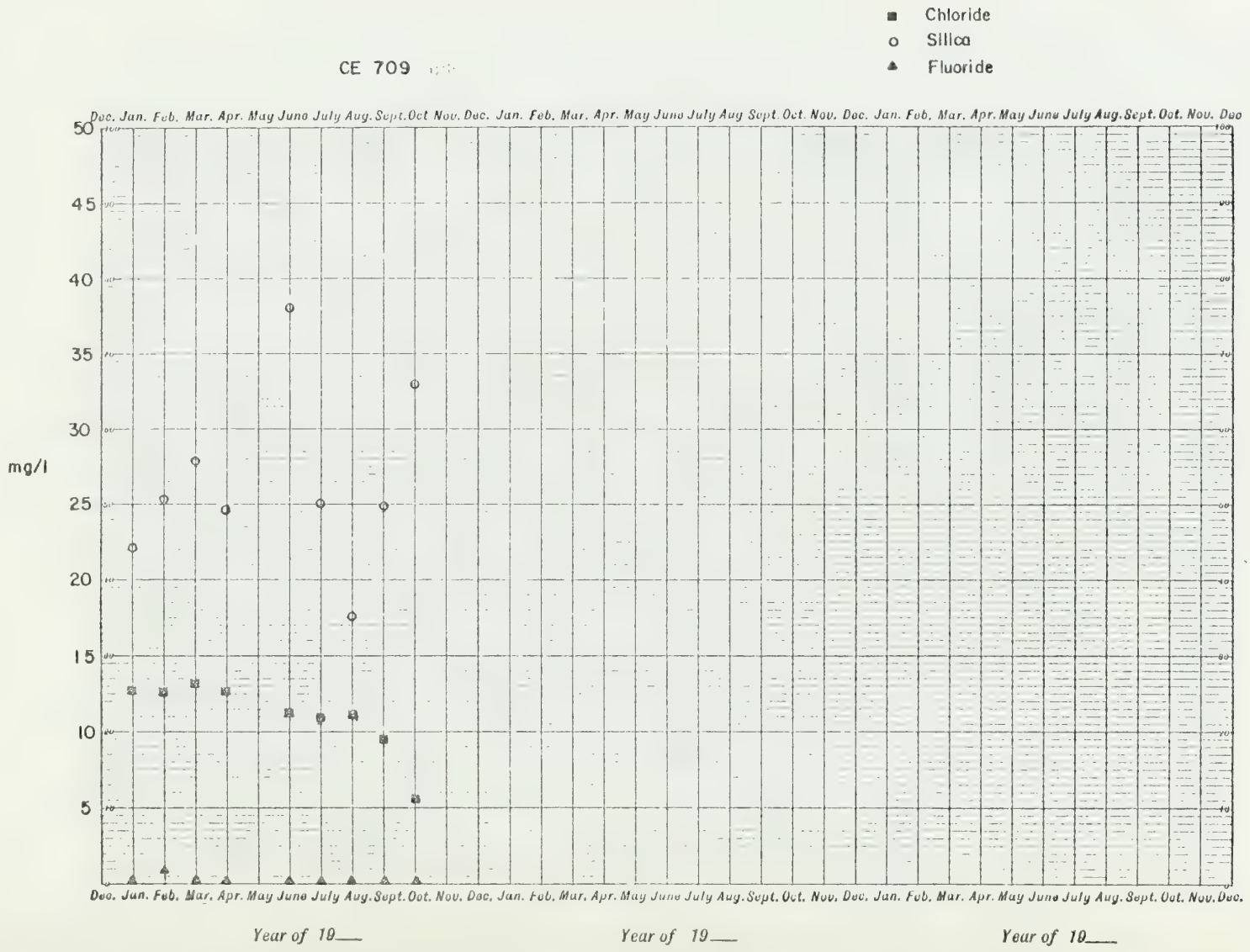
Chloride
Silica
Fluoride
CE 709
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec
50
45
40
35
30
25
20
15
10
5
mg/l
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 19___
Year of 19___
Year of 19___

Figure 5-133.

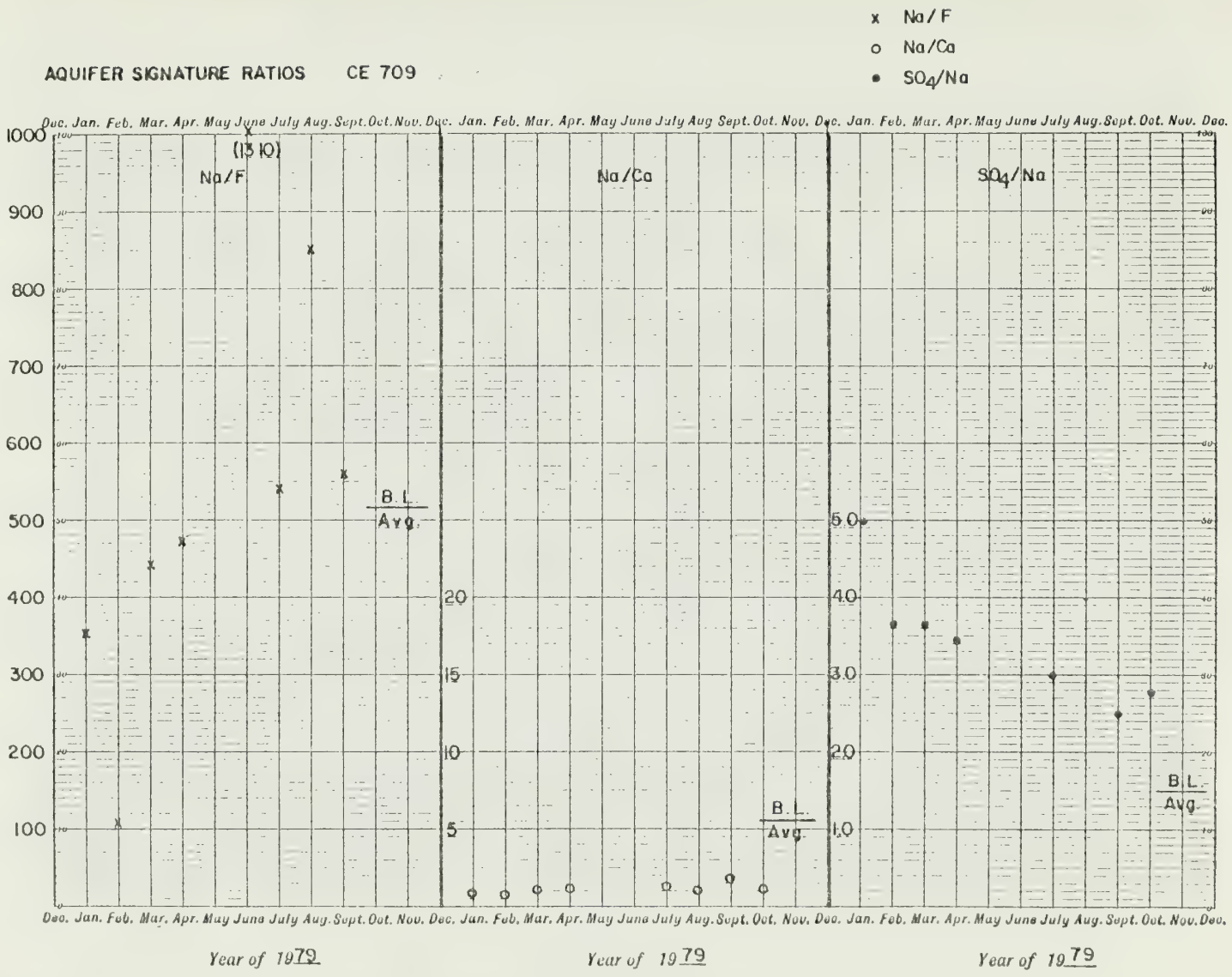
AQUIFER SIGNATURE RATIOS CE 709
x Na/F
o Na/Ca
• SO4/Na
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
1000
900
800
700
600
500
400
300
200
100
(1310)
Na/F
B.L. Avg.
Na/Ca
20
15
10
5
B.L. Avg.
SO4/Na
5.0
4.0
3.0
2.0
1.0
B.L. Avg.
Year of 1979
Year of 1979
Year of 1979

Figure 5-134.

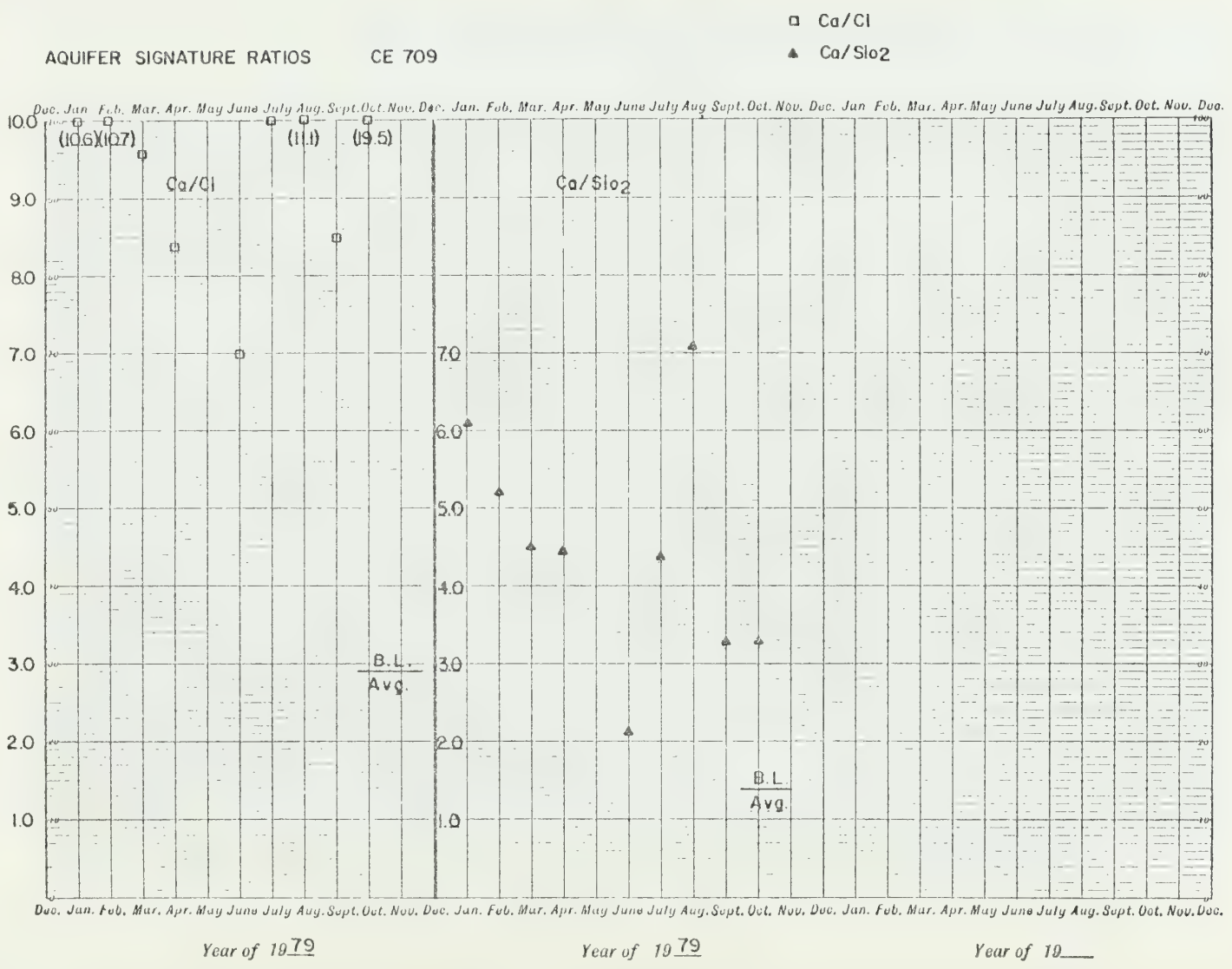
AQUIFER SIGNATURE RATIOS CE 709
Ca/Cl
Ca/Slo2
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
(10.6)(10.7)
(11.1)
(19.5)
Ca/Cl
B.L.
Avg.
Ca/Slo2
B.L.
Avg.
Year of 1979
Year of 1979
Year of 19___

Figure 5-135.

CE 705A

• Conductivity

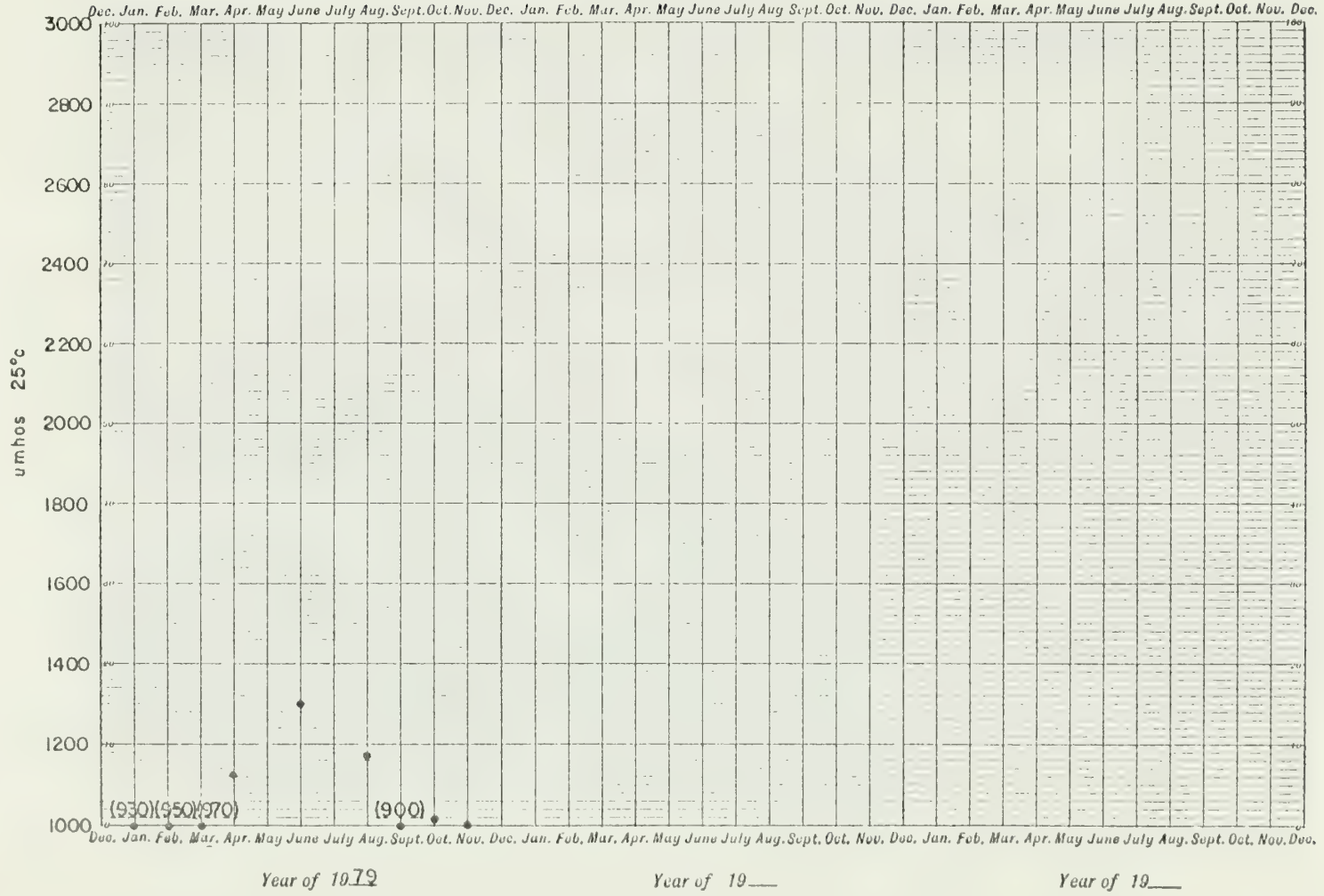

Figure 5-136.

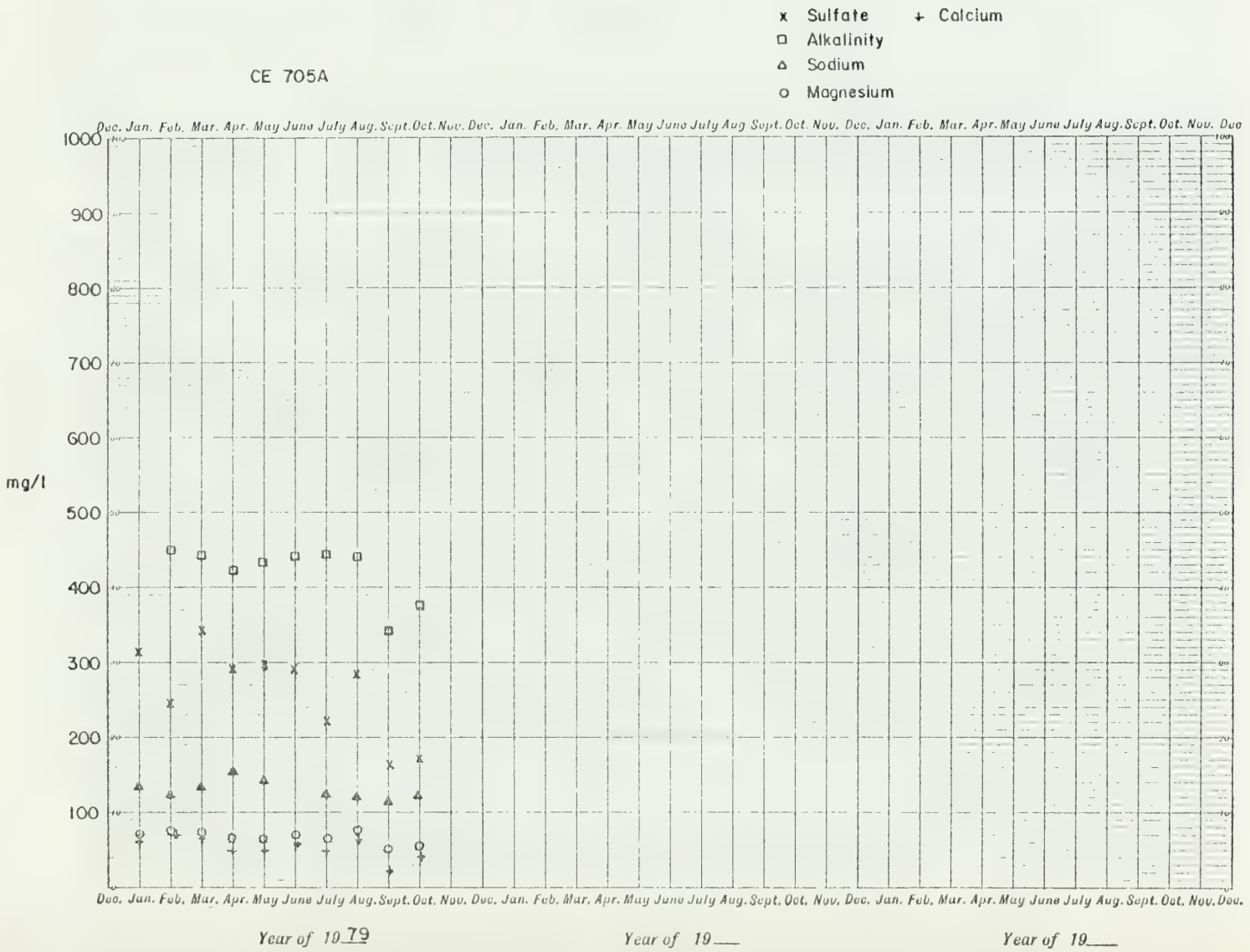
x Sulfate
+ Calcium
□ Alkalinity
△ Sodium
○ Magnesium
CE 705A
mg/l
1000
900
800
700
600
500
400
300
200
100
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 19 79
Year of 19___
Year of 19___

Figure 5-137.

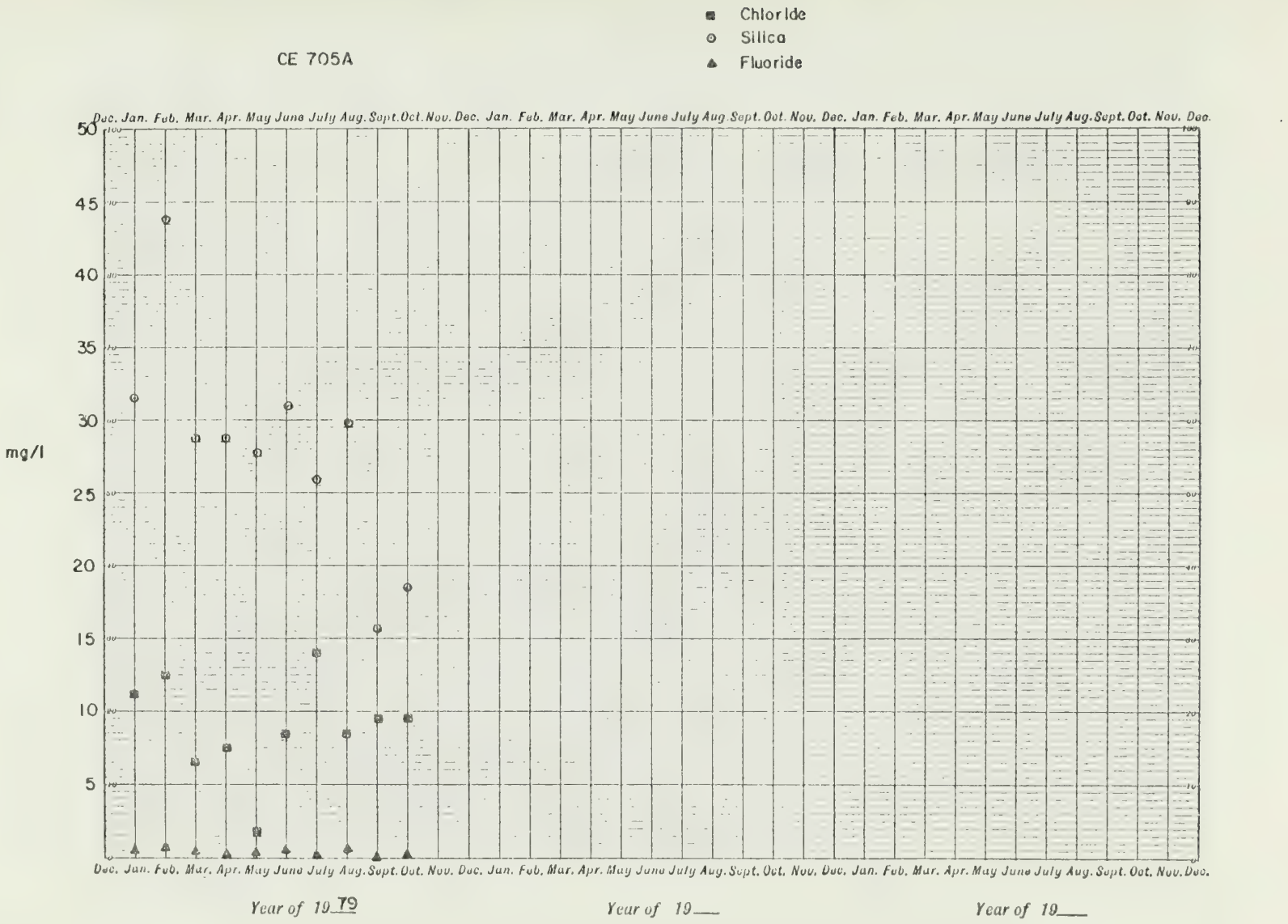
Chloride
Silica
Fluoride
CE 705A
mg/l
50
45
40
35
30
25
20
15
10
5
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 19 79
Year of 19___
Year of 19___

Figure 5-138.

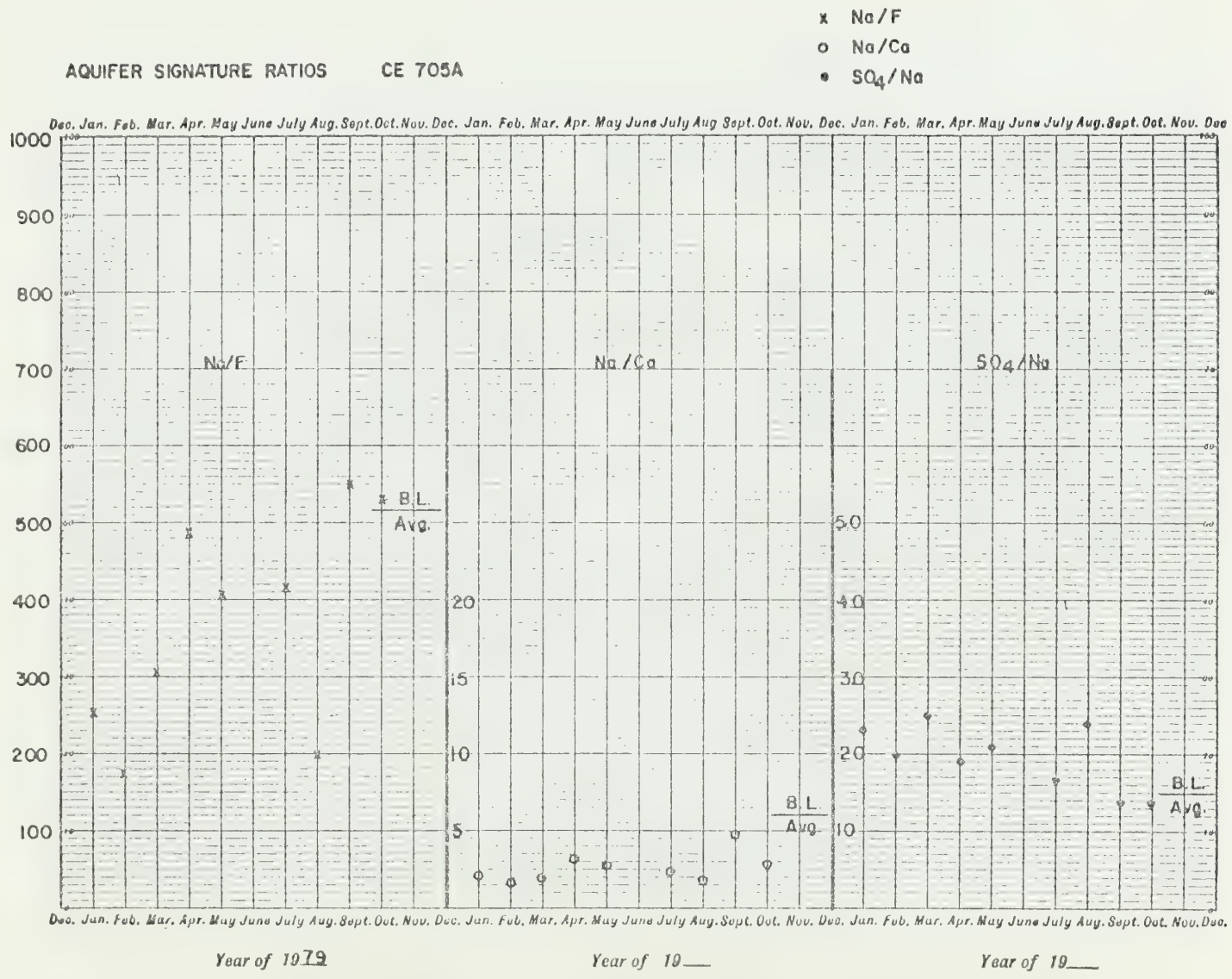
AQUIFER SIGNATURE RATIOS CE 705A
x Na/F
o Na/Ca
• SO4/Na
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec
1000
900
800
700
600
500
400
300
200
100
Na/F
Na/Ca
SO4/Na
B.L. Avg.
20
15
10
5
5.0
4.0
3.0
2.0
1.0
Year of 1979
Year of 19___
Year of 19___

Figure 5-139.

AQUIFER SIGNATURE RATIOS CE 705A

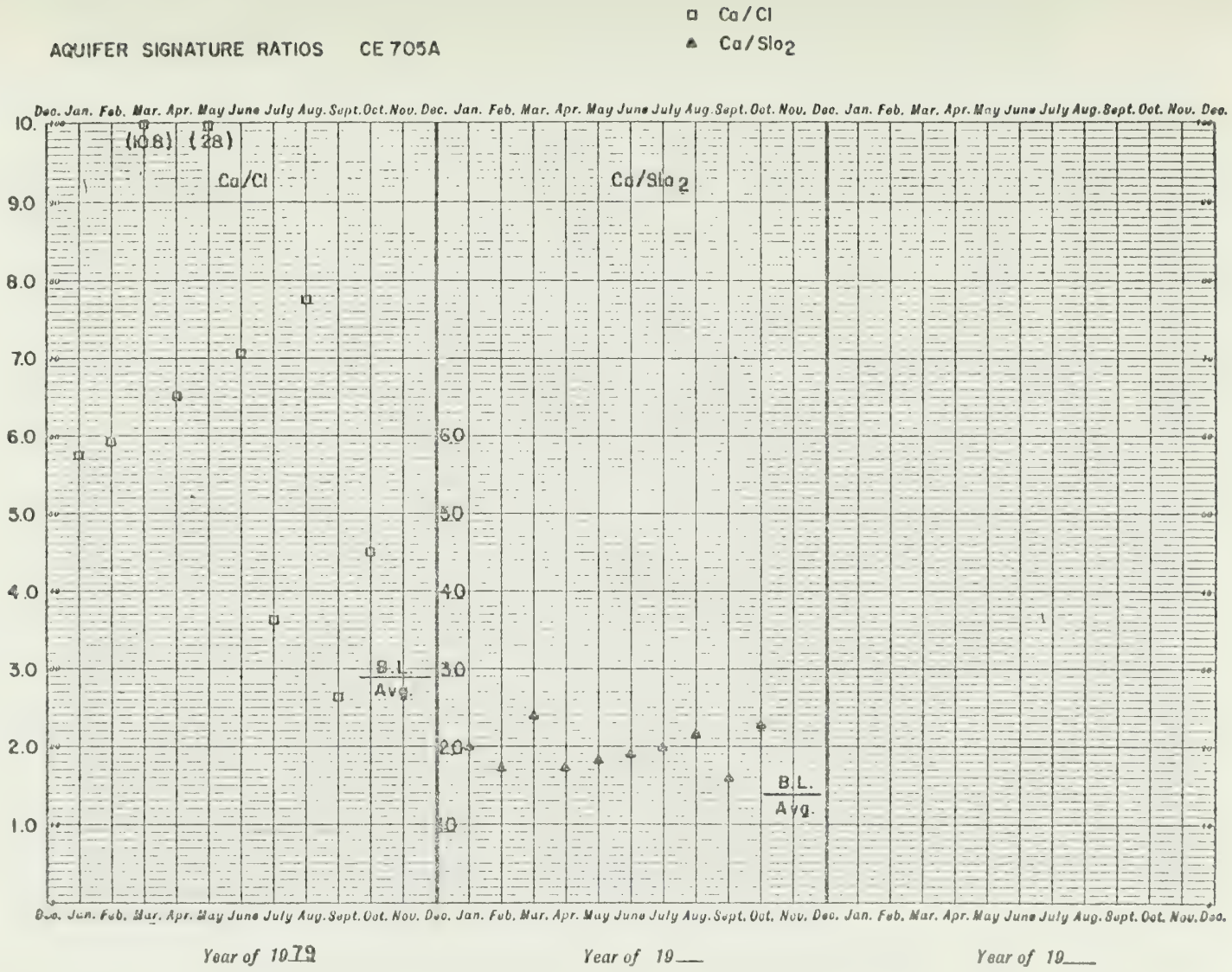

Figure 5-140.

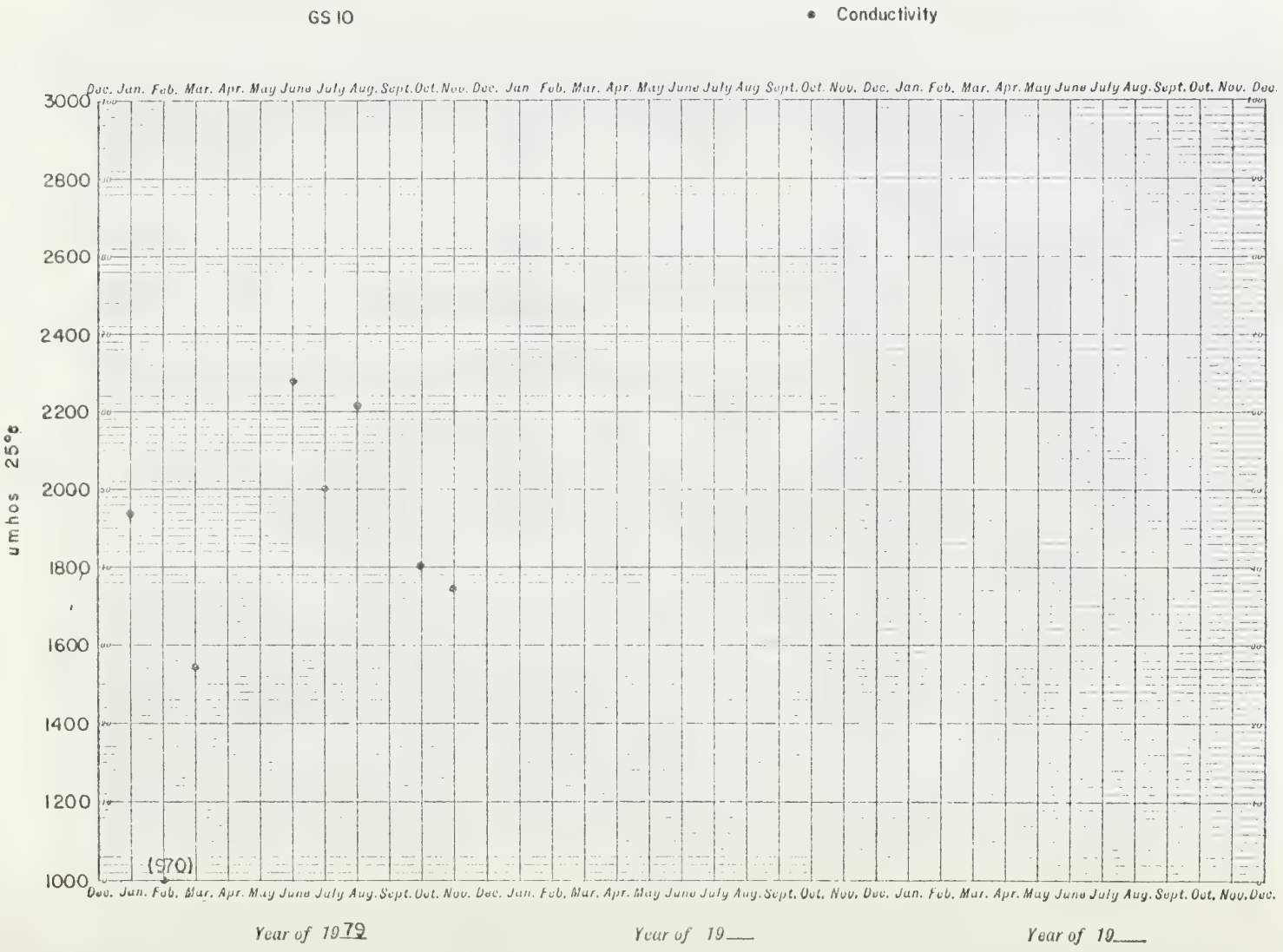
GS 10
Conductivity
umhos 25°c
3000
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
(970)
Year of 1979
Year of 19___
Year of 19___

Figure 5-141.

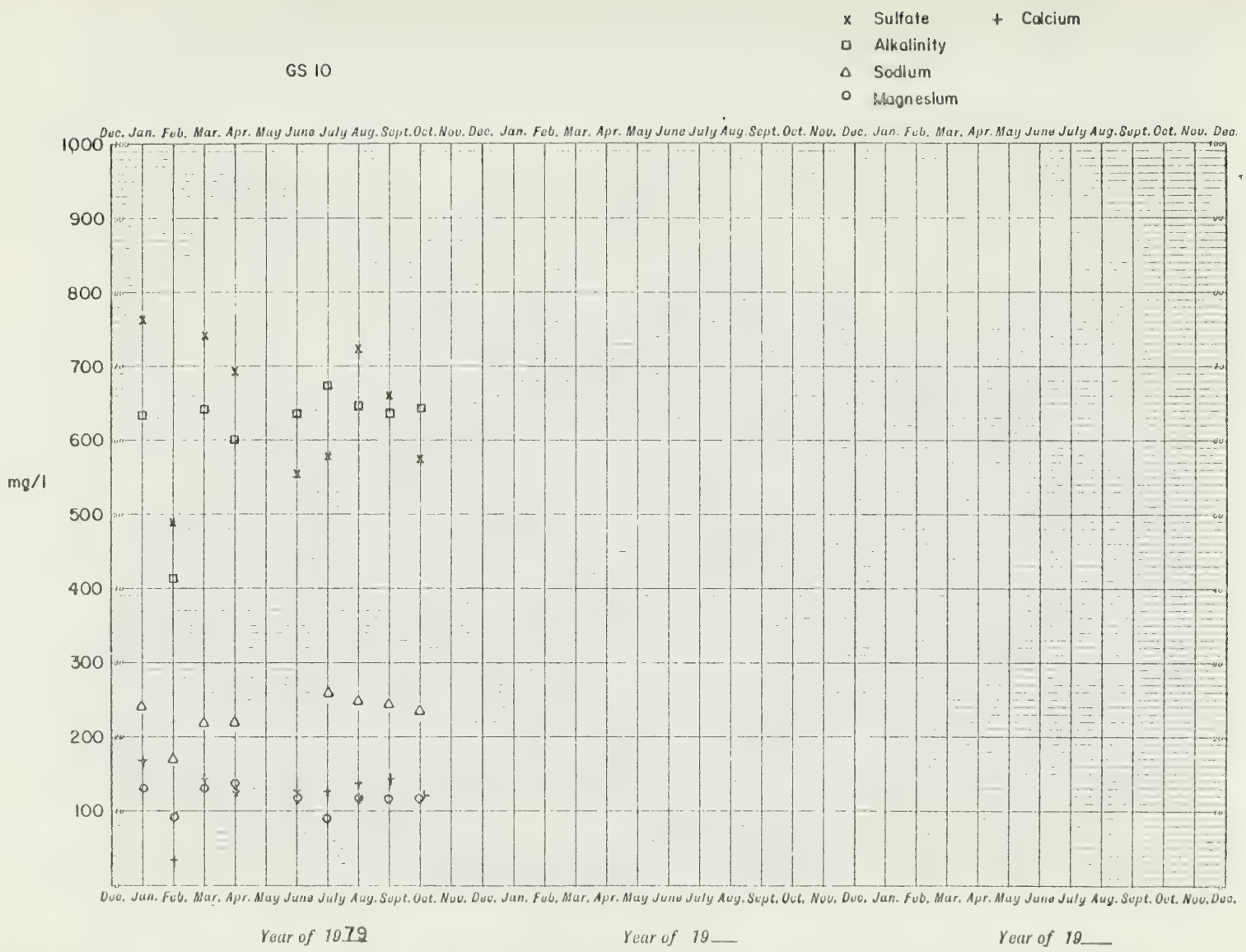
GS 10
x Sulfate
+ Calcium
□ Alkalinity
△ Sodium
○ Magnesium
mg/l
1000
900
800
700
600
500
400
300
200
100
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1979
Year of 19___
Year of 19___

Figure 5-142.

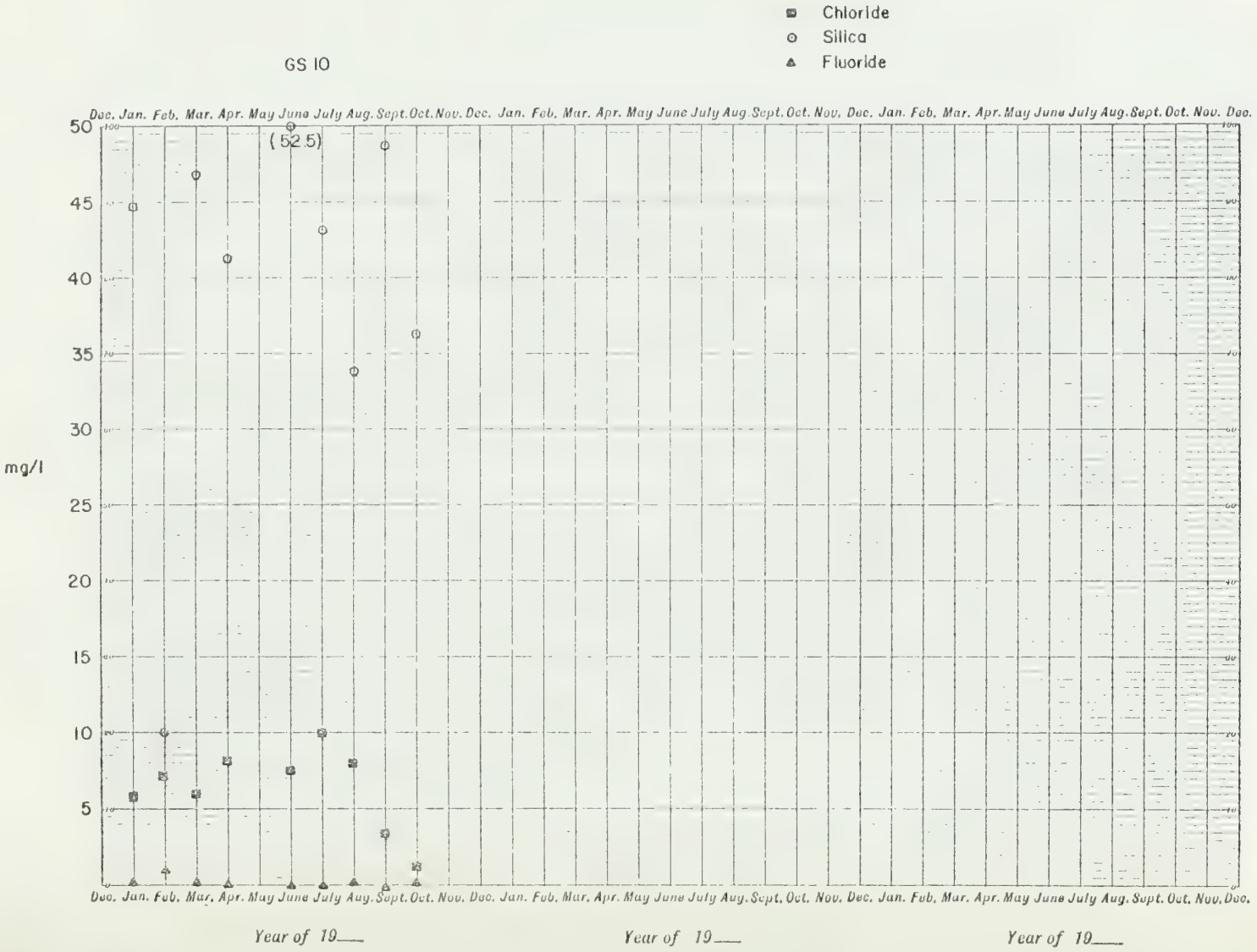
Chloride
Silica
Fluoride
GS 10
(52.5)
mg/l
50
45
40
35
30
25
20
15
10
5
0
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 19___
Year of 19___
Year of 19___

Figure 5-143.

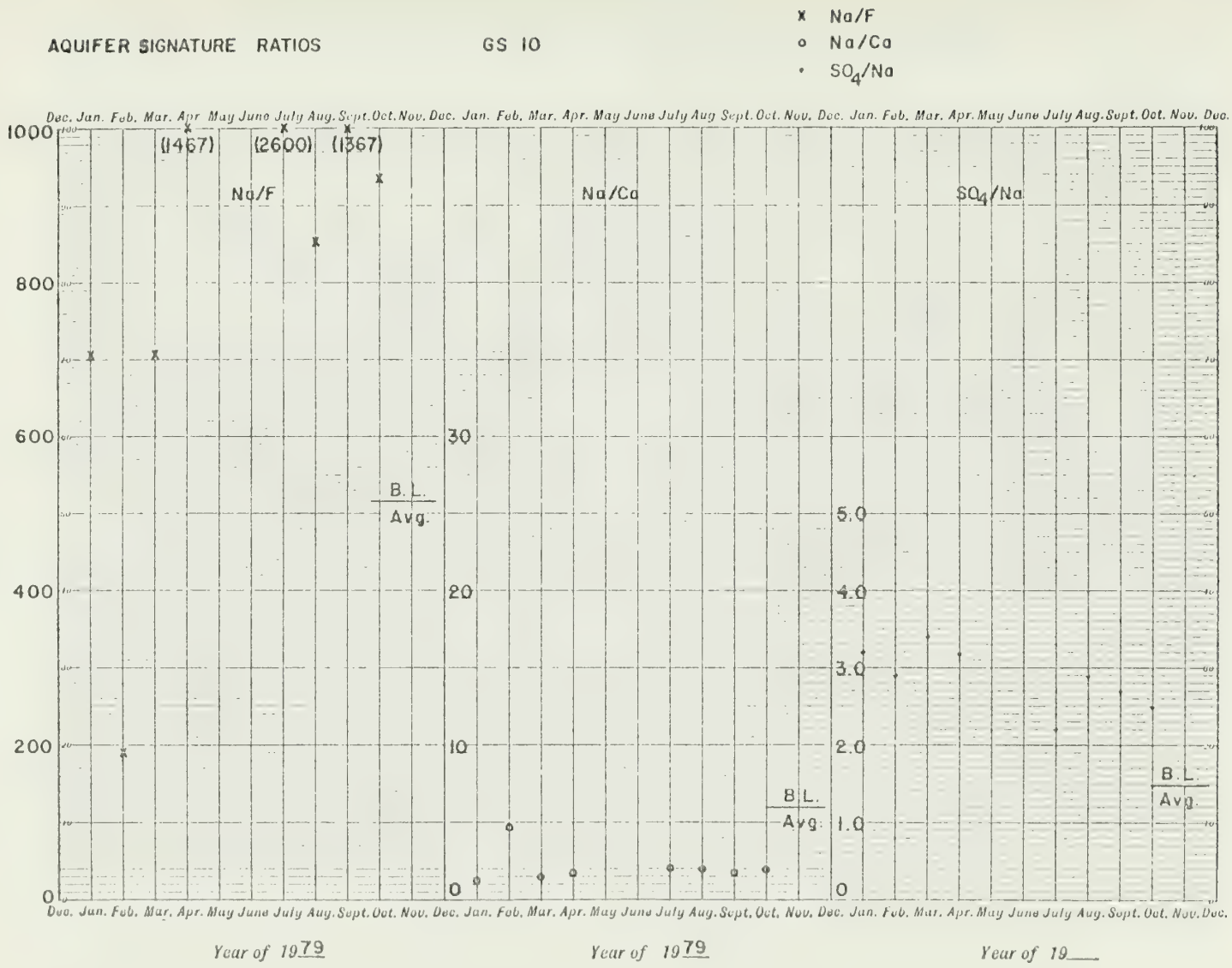
AQUIFER SIGNATURE RATIOS
GS 10
x Na/F
o Na/Ca
• SO4/Na
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
1000
800
600
400
200
0
(1467)
(2600)
(1367)
Na/F
Na/Ca
SO4/Na
30
20
10
0
5.0
4.0
3.0
2.0
1.0
0
B.L.
Avg.
B.L.
Avg.
B.L.
Avg.
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1979
Year of 1979
Year of 19___

Figure 5-144.

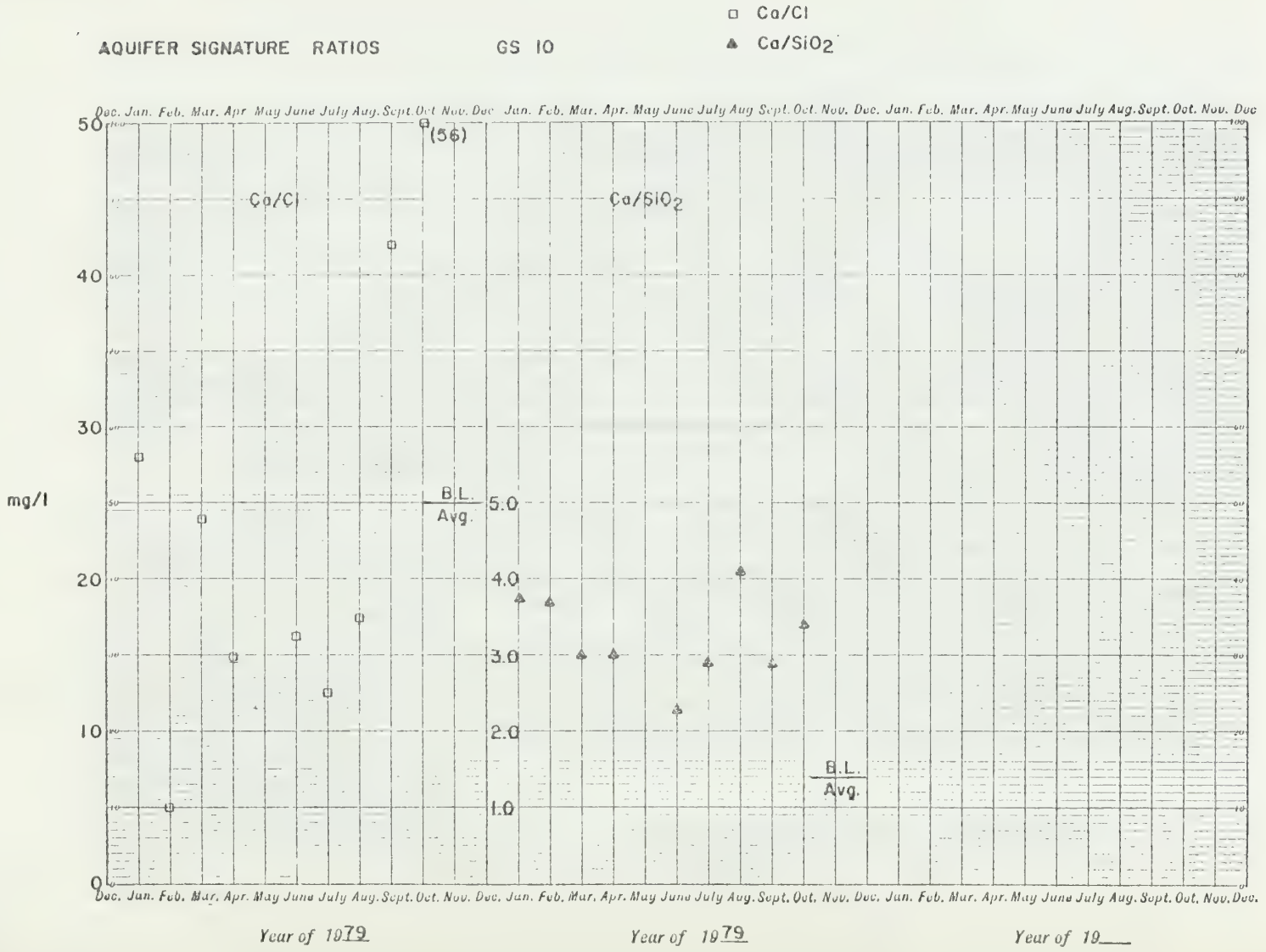
AQUIFER SIGNATURE RATIOS
GS 10
□ Ca/Cl
▲ Ca/SiO2
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec
50
40
30
20
10
0
mg/l
(56)
Ca/Cl
Ca/SiO2
B.L. Avg.
5.0
4.0
3.0
2.0
1.0
B.L. Avg.
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1979
Year of 1979
Year of 19___

Figure 5-145.

GS 15 U • Conductivity

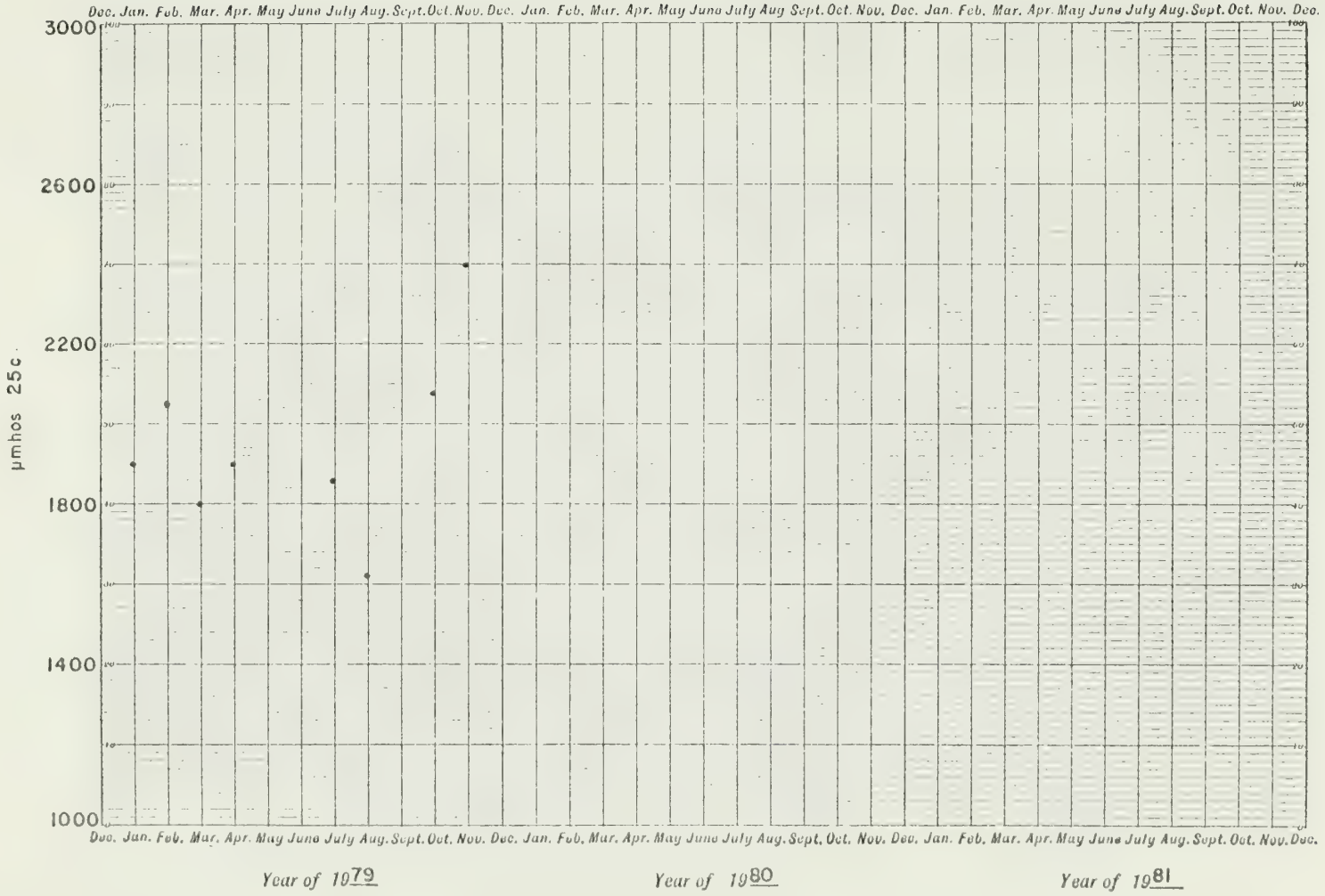

Figure 5-146.

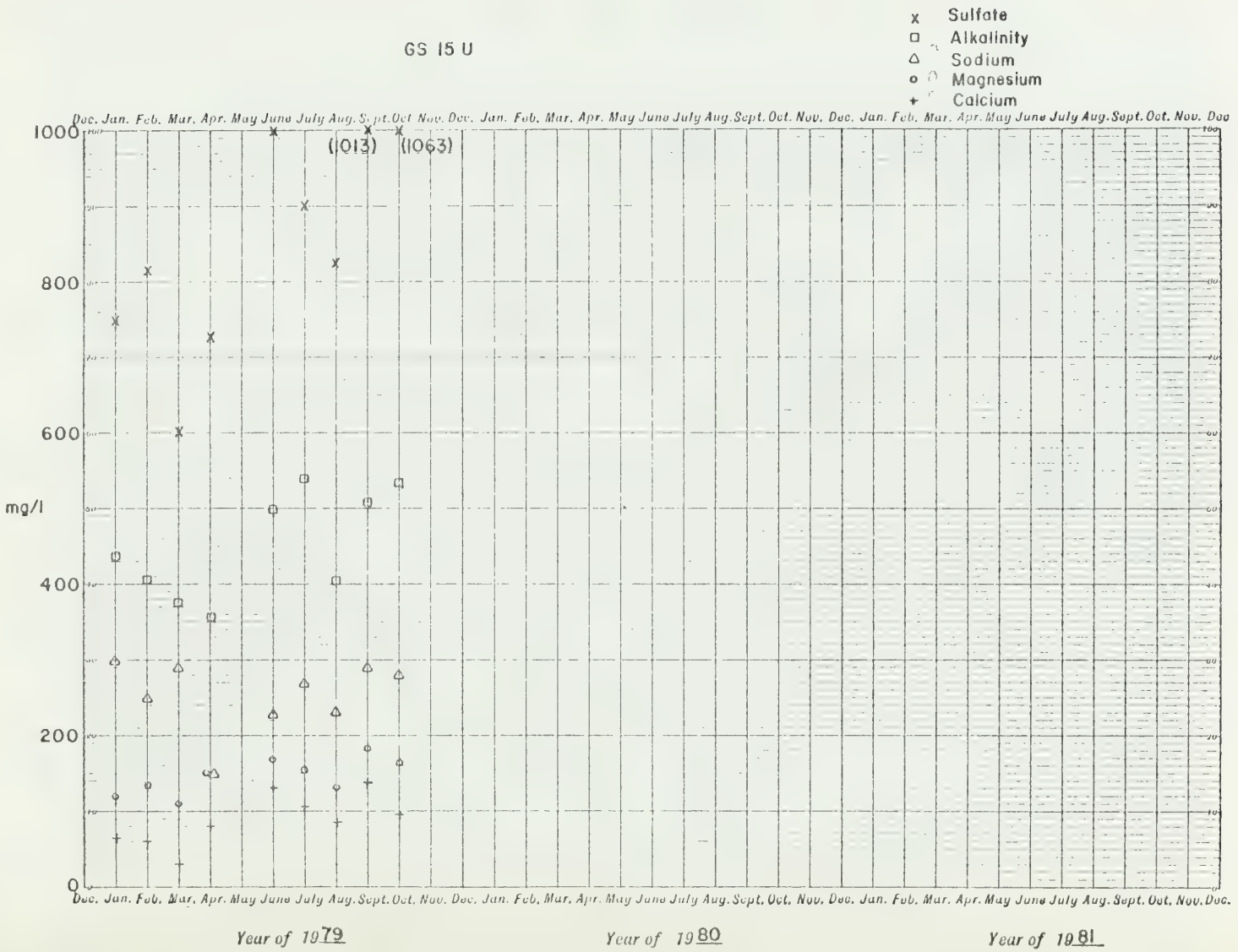
GS 15 U
x Sulfate
□ Alkalinity
△ Sodium
o Magnesium
+ Calcium
(013)
(1063)
1000
800
600
400
200
0
mg/l
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec
Year of 1979
Year of 1980
Year of 1981

Figure 5-147.

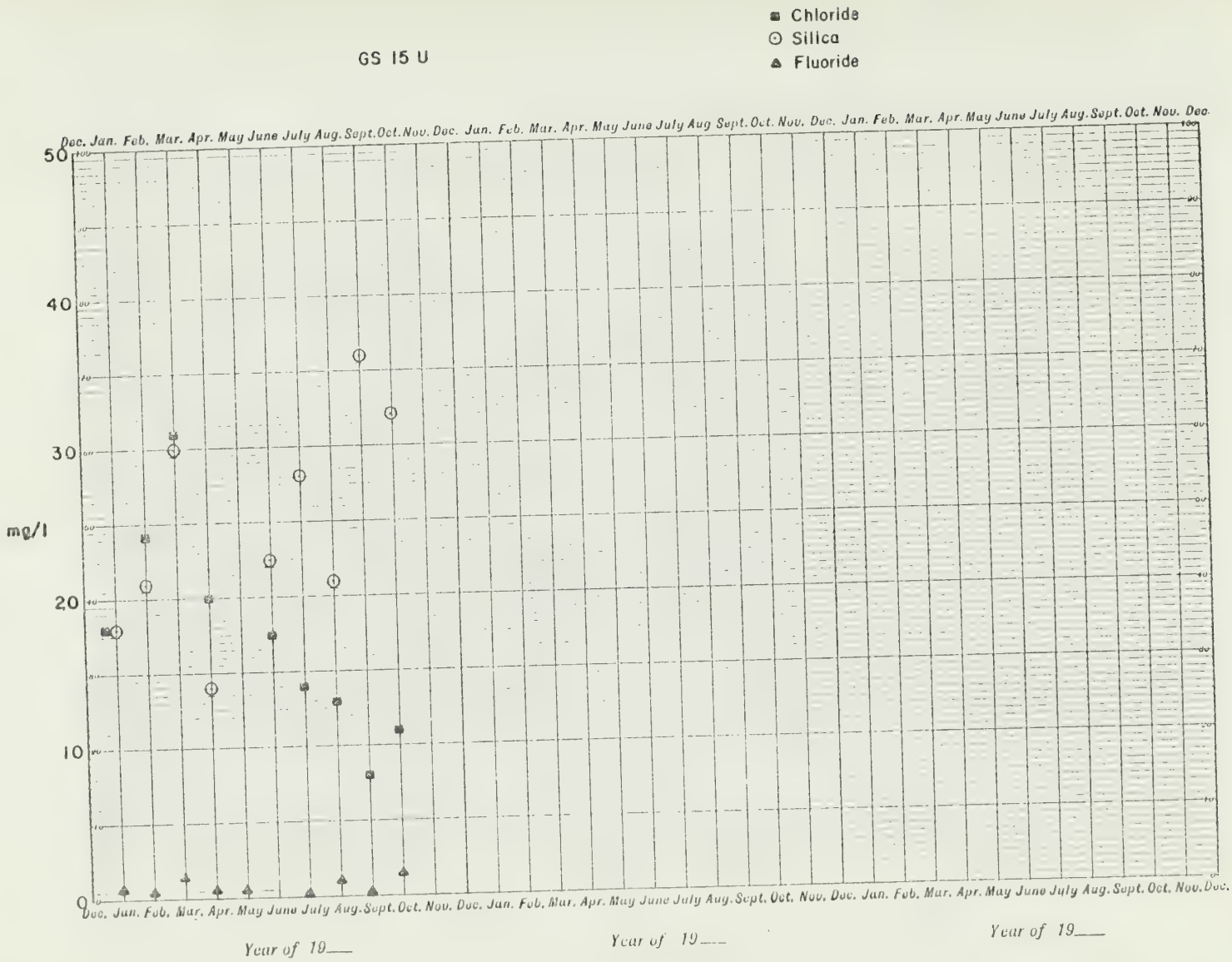
GS 15 U
Chloride
Silica
Fluoride
mg/l
50
40
30
20
10
0
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 19__
Year of 19__
Year of 19__

Figure 5-148.

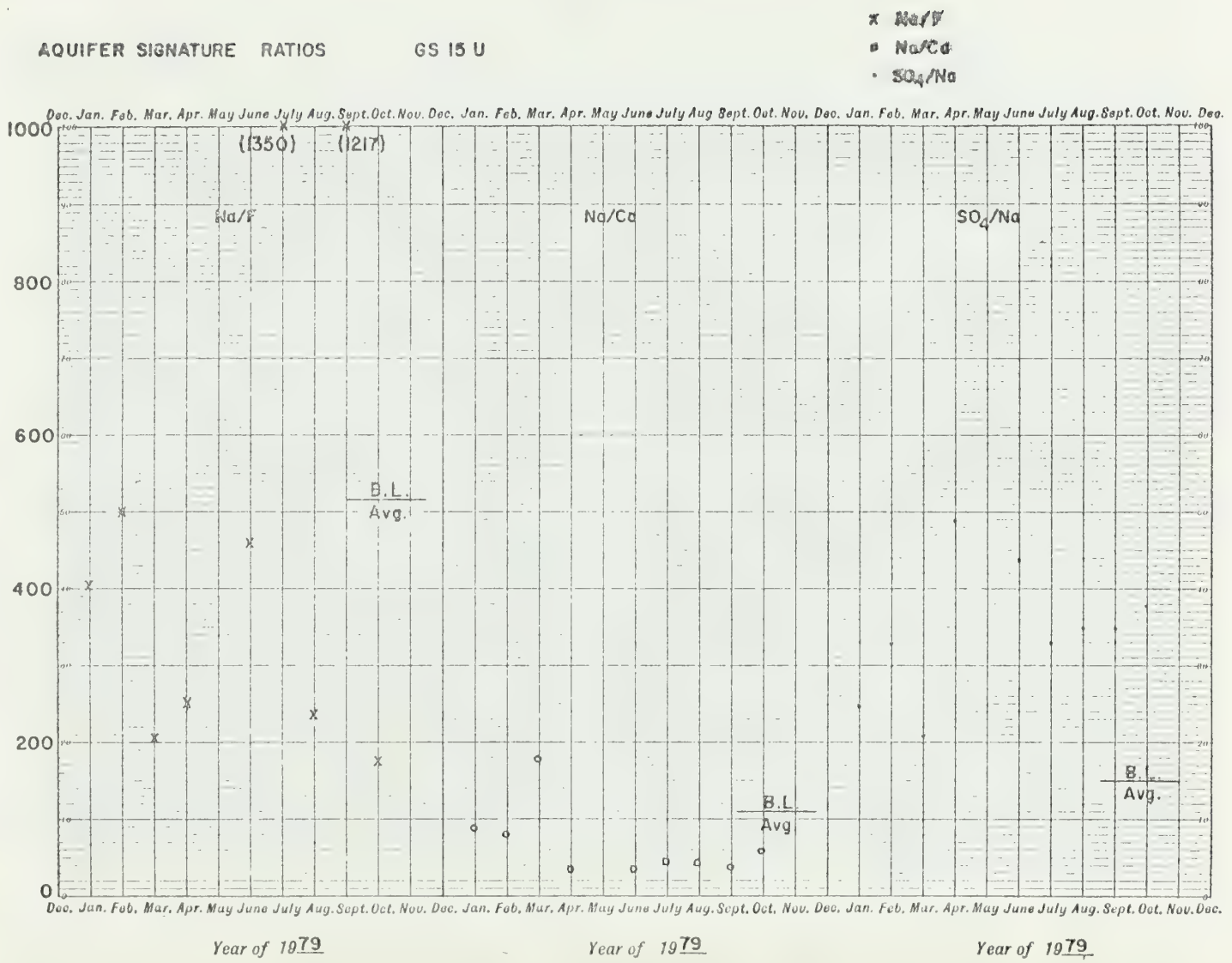
AQUIFER SIGNATURE RATIOS GS 15 U
x Na/F
• Na/Ca
· SO4/Na
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
1000
800
600
400
200
0
(1350)
(1217)
Na/F
Na/Ca
SO4/Na
B.L.
Avg.
B.L
Avg
B.L.
Avg.
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1979
Year of 1979
Year of 1979

Figure 5-149.

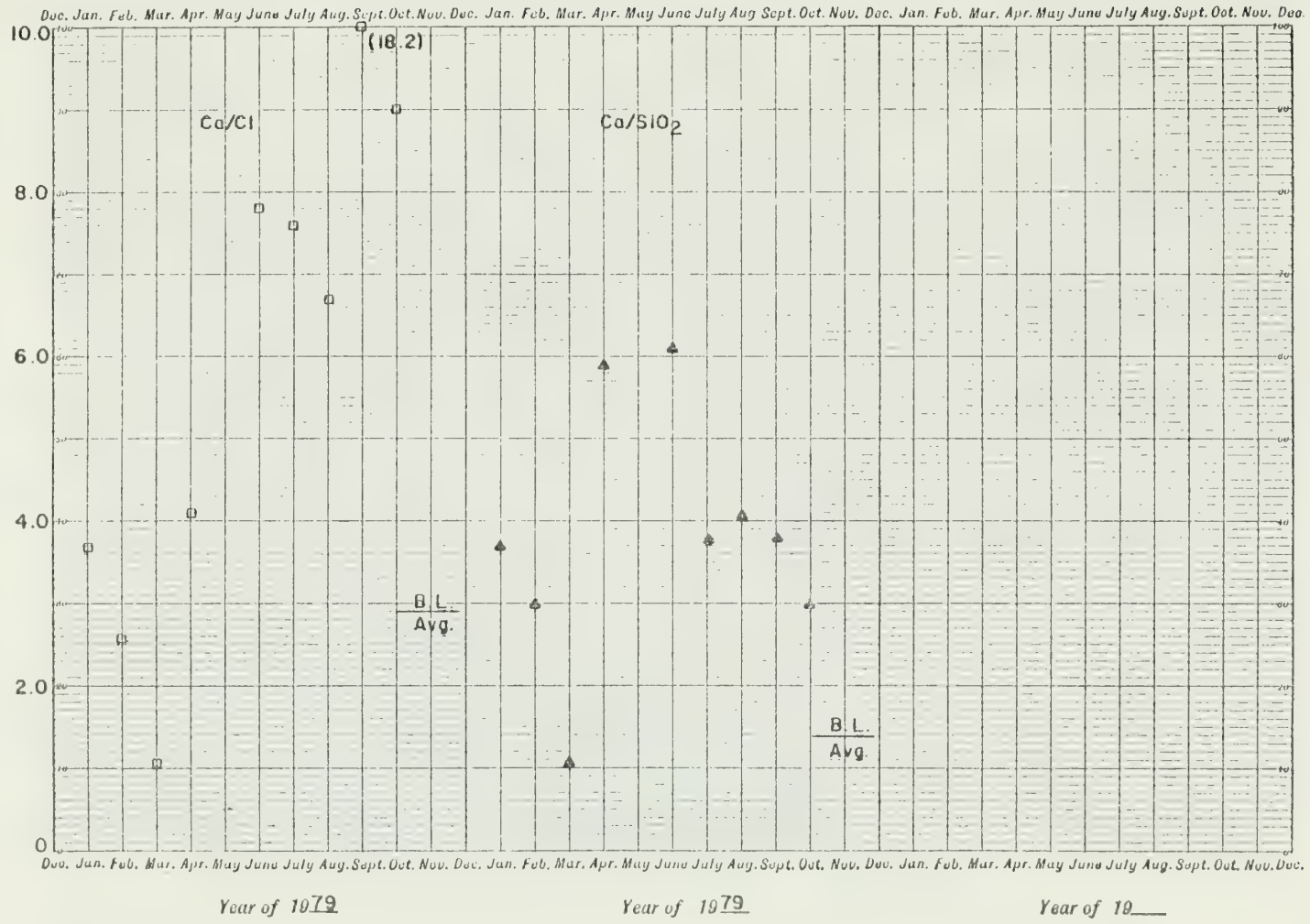
AQUIFER SIGNATURE RATIOS
GS 15 U
Ca/Cl
Ca/SiO2
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
10.0
8.0
6.0
4.0
2.0
0
(18.2)
Ca/Cl
Ca/SiO2
B.L. Avg.
B.L. Avg.
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1979
Year of 1979
Year of 19___

Figure 5-150.

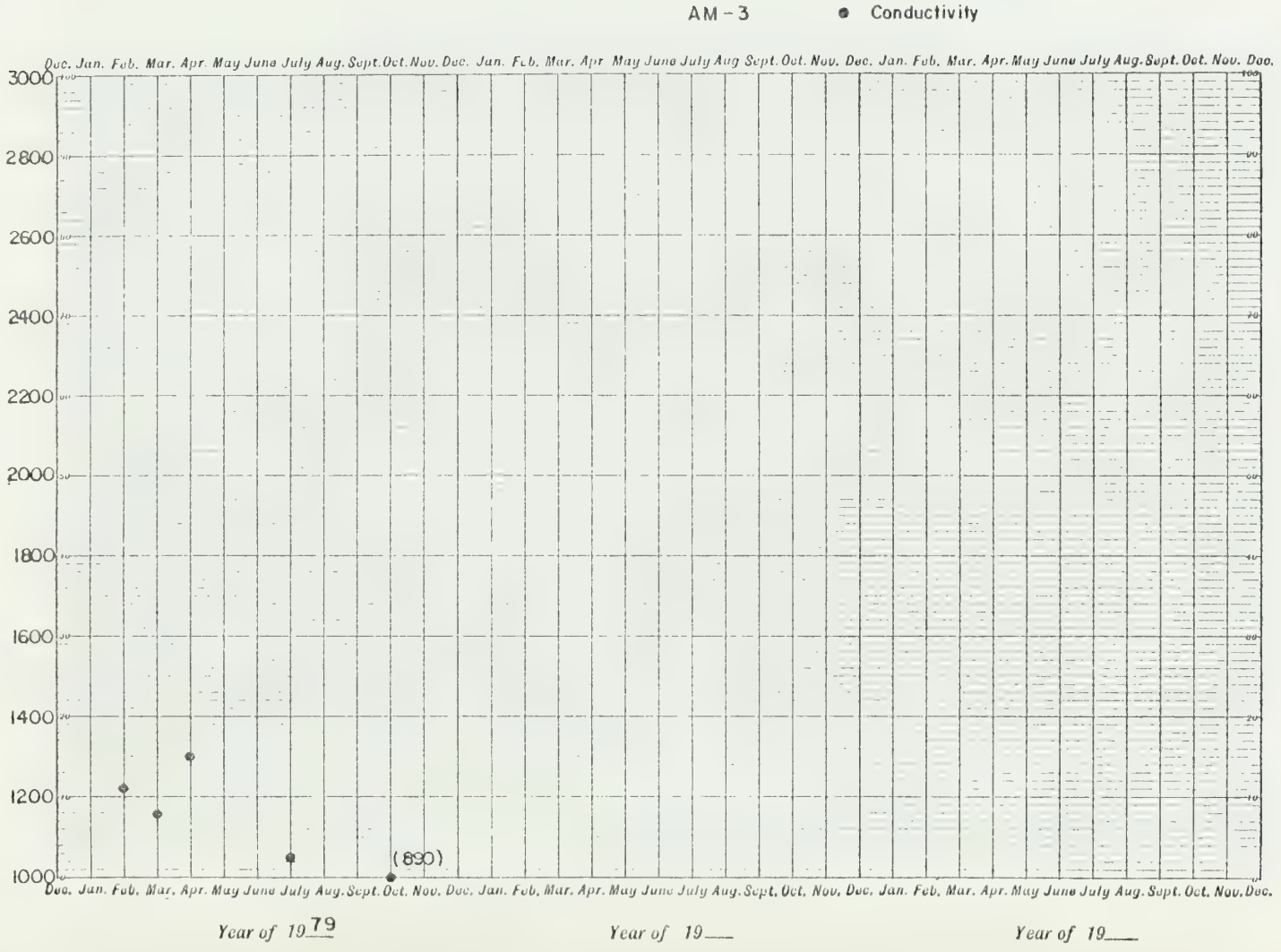
AM - 3
Conductivity
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
3000
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
(890)
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1979
Year of 19___
Year of 19___

Figure 5-151.

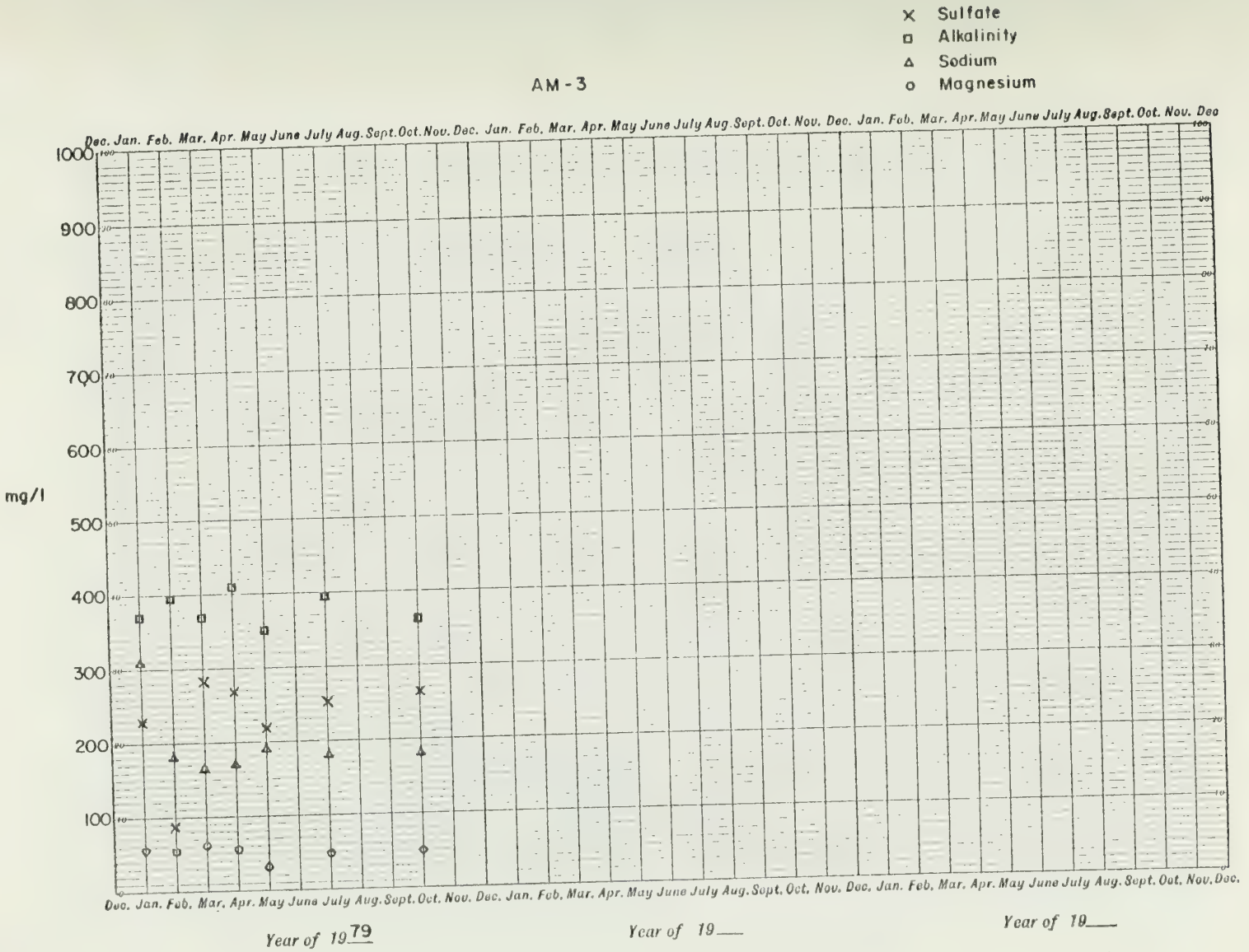
Sulfate
Alkalinity
Sodium
Magnesium
AM-3
mg/l
1000
900
800
700
600
500
400
300
200
100
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1979
Year of 19___
Year of 19___

Figure 5-152.

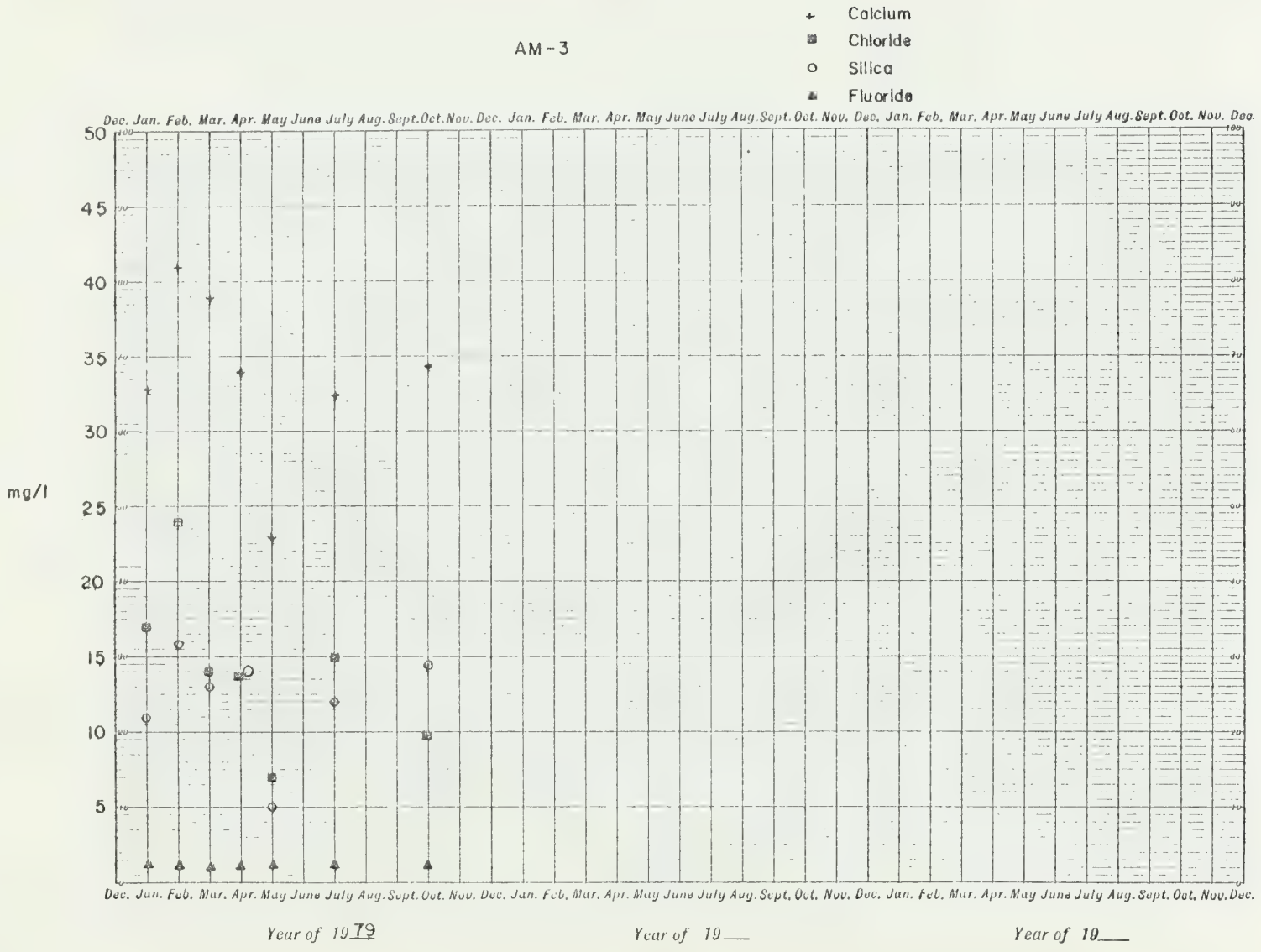
AM-3
Calcium
Chloride
Silica
Fluoride
mg/l
50
45
40
35
30
25
20
15
10
5
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1979
Year of 19___
Year of 19___

Figure 5-153.

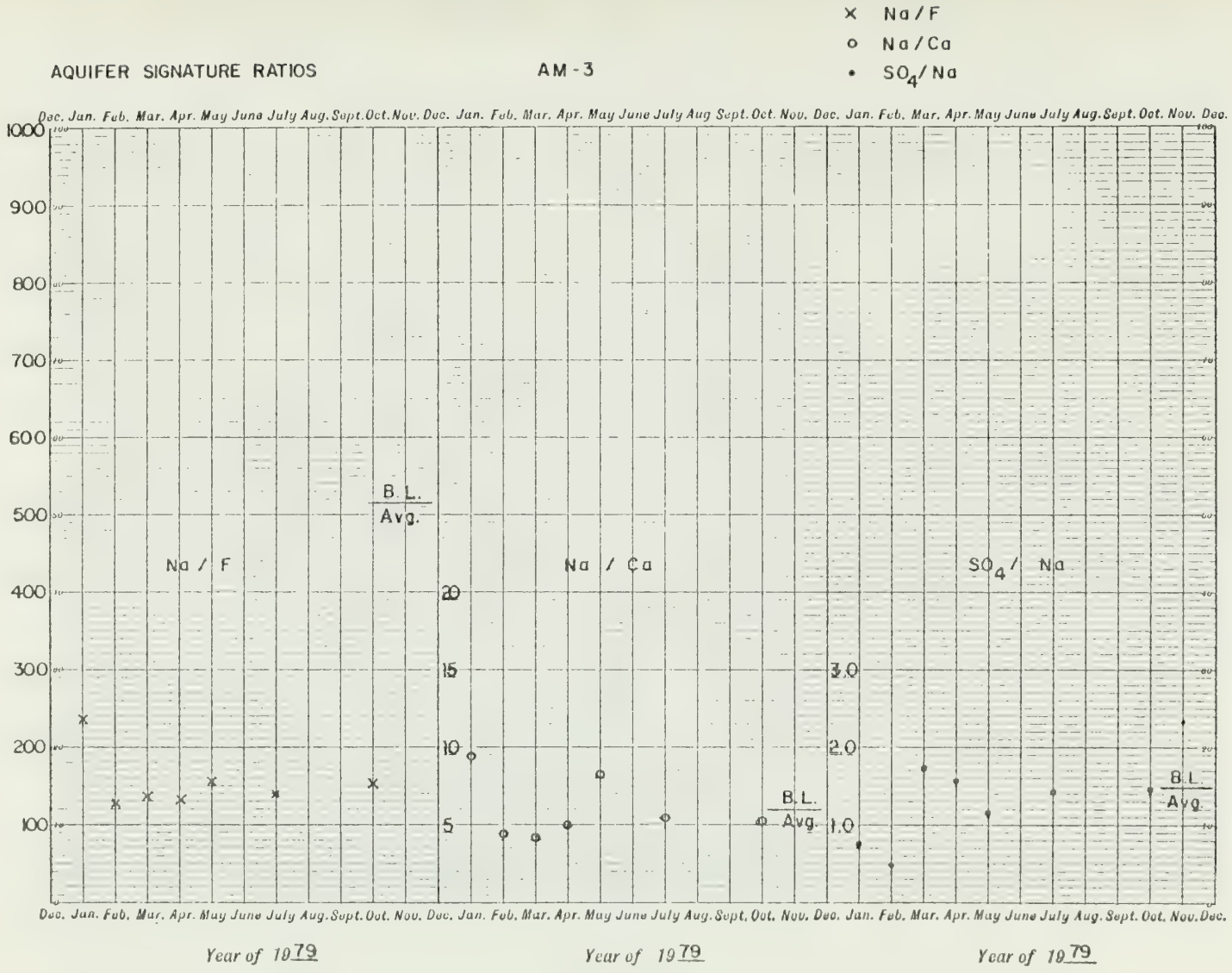
AQUIFER SIGNATURE RATIOS
AM-3
× Na/F
o Na/Ca
• SO4/Na
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
1000
900
800
700
600
500
400
300
200
100
B.L. / Avg.
Na / F
Na / Ca
SO4 / Na
20
15
10
5
3.0
2.0
1.0
B.L. / Avg.
B.L. / Avg.
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1979
Year of 1979
Year of 1979

Figure 5-154.

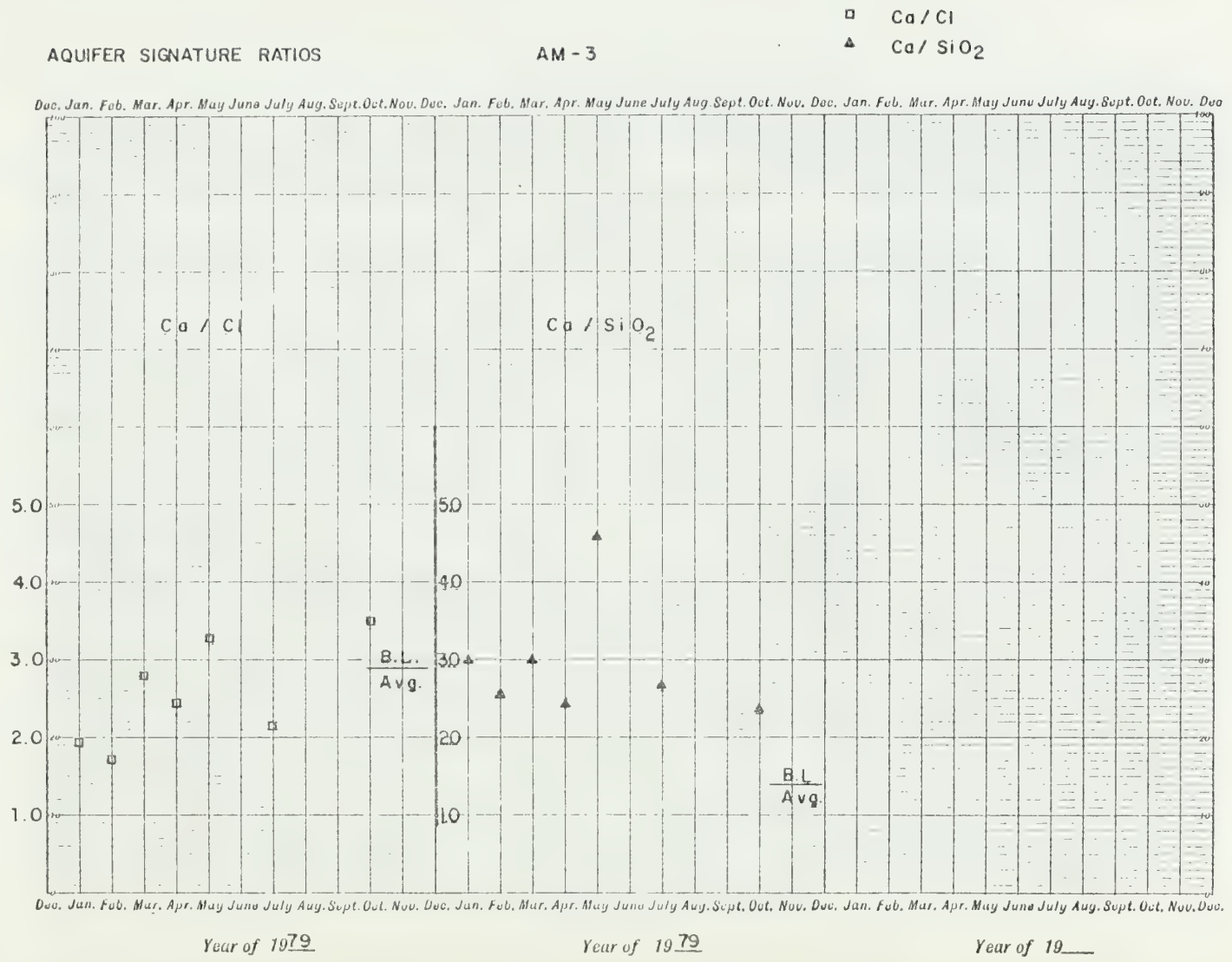
AQUIFER SIGNATURE RATIOS
AM-3
Ca / Cl
Ca / SiO2
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Ca / Cl
Ca / SiO2
5.0
4.0
3.0
2.0
1.0
50
40
30
20
10
B.L.
Avg.
B.L.
Avg.
Year of 1979
Year of 1979
Year of 19___

Figure 5-155.

GS 15 L • Conductivity

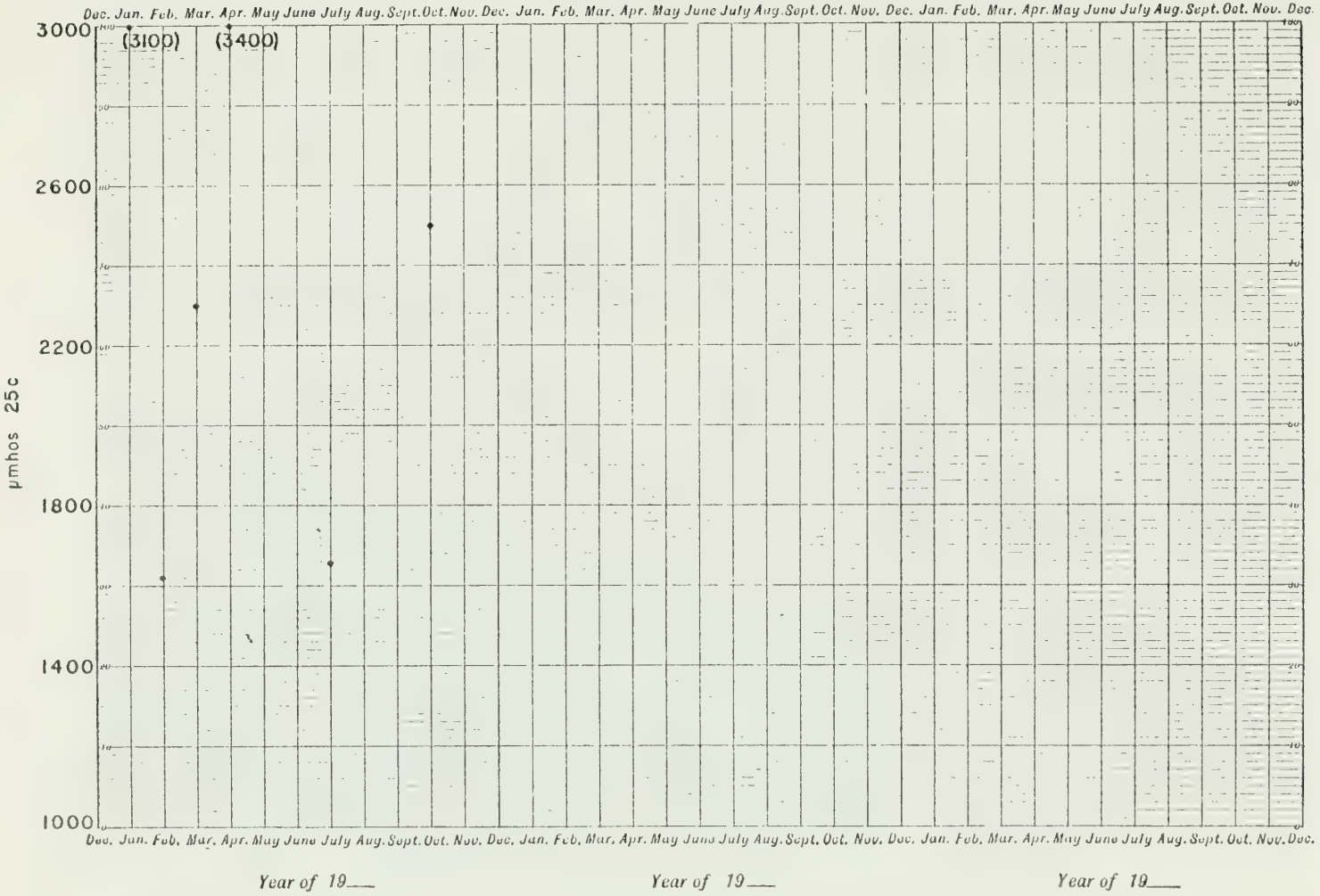

Figure 5-156.

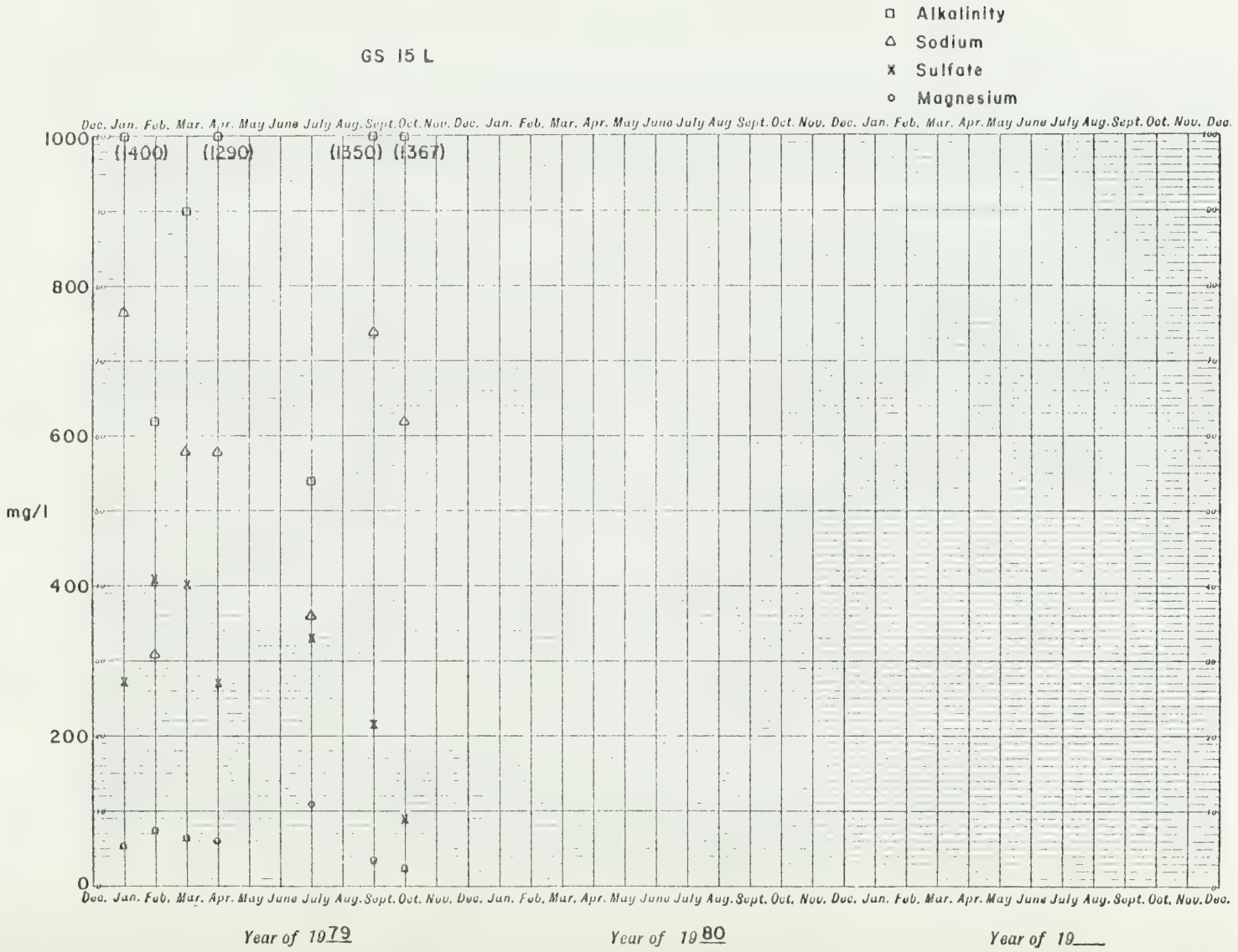
GS 15 L
Alkalinity
Sodium
Sulfate
Magnesium
(1400)
(1290)
(1350)
(1367)
1000
800
600
400
200
0
mg/l
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1979
Year of 1980
Year of 19___

Figure 5-157.

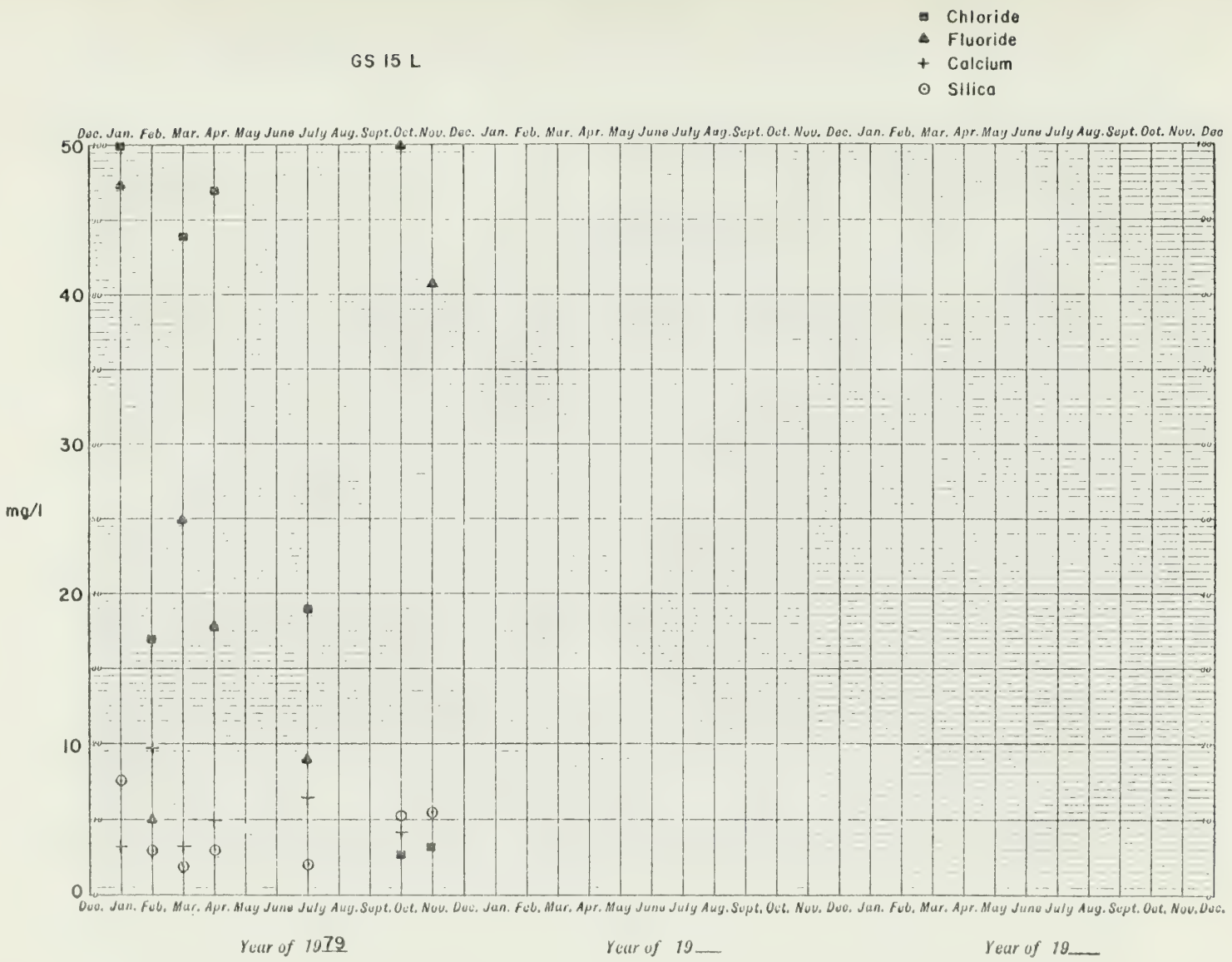
GS 15 L
Chloride
Fluoride
Calcium
Silica
mg/l
50
40
30
20
10
0
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec
Year of 1979
Year of 19___
Year of 19___

Figure 5-158.

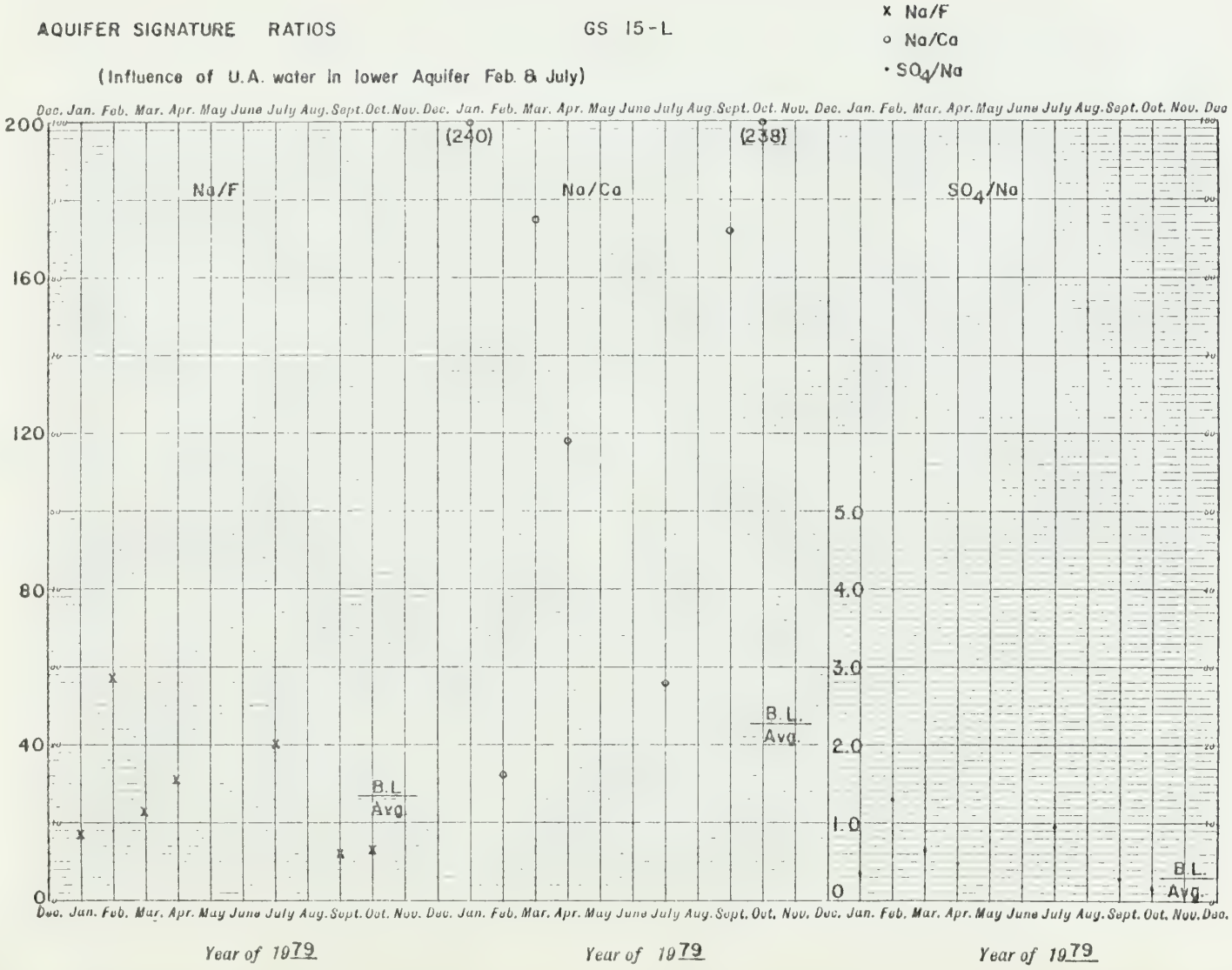
AQUIFER SIGNATURE RATIOS
GS 15-L
(Influence of U.A. water in lower Aquifer Feb. & July)
x Na/F
o Na/Ca
• SO4/Na
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
200
160
120
80
40
0
Na/F
(240)
Na/Ca
(238)
SO4/Na
5.0
4.0
3.0
2.0
1.0
0
B.L. Avg.
B.L. Avg.
B.L. Avg.
Year of 1979
Year of 1979
Year of 1979

Figure 5-159.

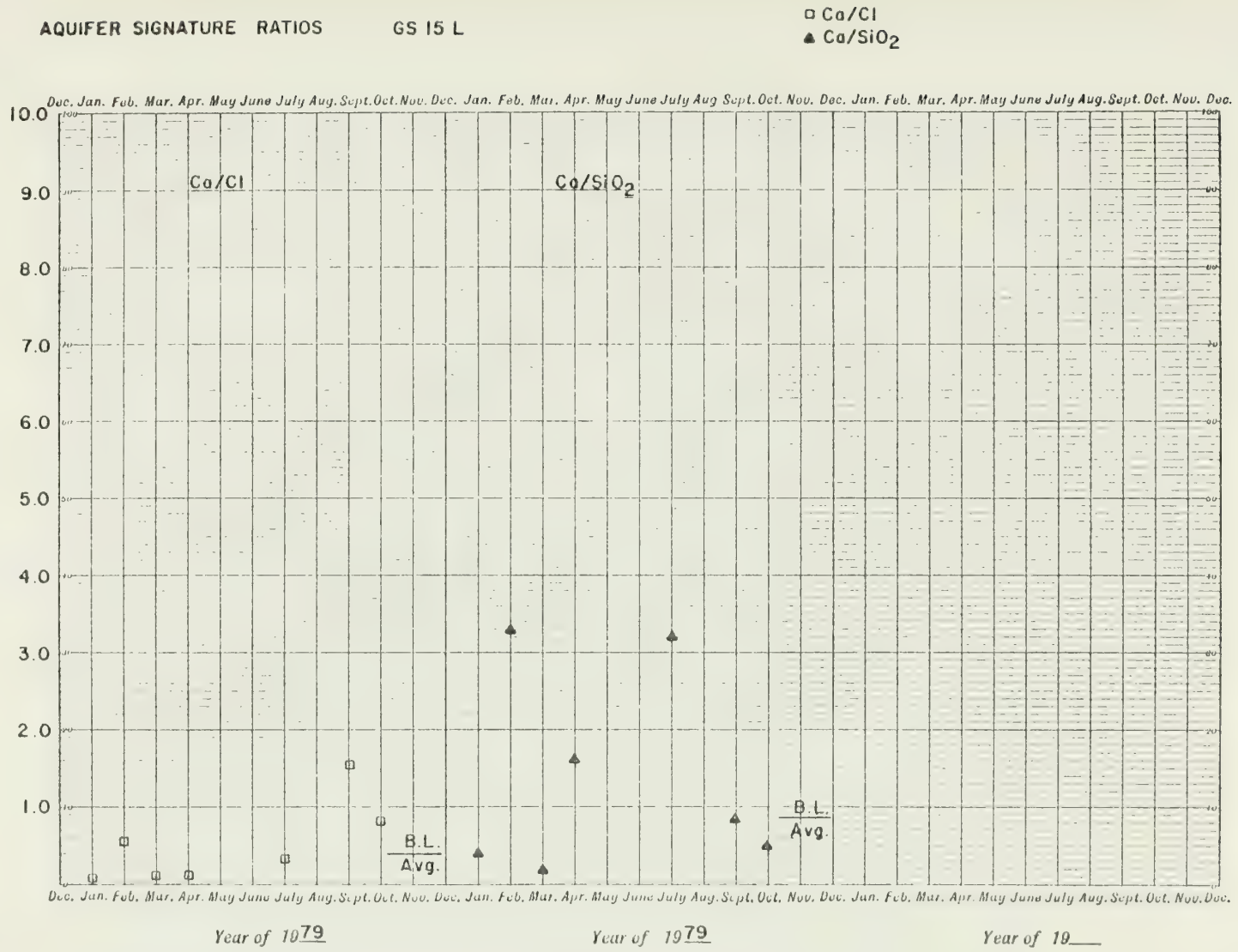
AQUIFER SIGNATURE RATIOS
GS 15 L
□ Ca/Cl
▲ Ca/SiO2
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
Ca/Cl
Ca/SiO2
B.L. Avg.
B.L. Avg.
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1979
Year of 1979
Year of 19___

Figure 5-160.

APPENDIX 6-2

Revegetation Data

APPENDIX 6-2.1

Cover Data from RBOSC 1979 Revegetation Studies

Site R3, Tract C-a

Contained herein are cover data for Site R3 and a list with species names which correspond to abbreviations used on the print-outs. Cover estimates are in percent and mean cover is based on six-1 x 1 subplots sampled. Invaded species are indicated by an "I". Designations used in the life form column (LIF_FORM) are as follows:

F = forb
G = grass
S = shrub

Species List for R3 Experimental Revegetation Studies

Abbreviation	Generic Name
Graminoids Planted	
AGR-RIP	*Agropyron riparium* var. *Sodar*
AGR-SMI	*Agropyron smithii* var. *Rosana*
AGR-SPP	*Agropyron* spp.
AGR-TRI	*Agropyron trichophorum* var *Luna*
BRO-INE	*Bromus inermis*
ORY-HYM	*Oryzopsis hymenoides*
STI-VIR	*Stipa viridula*
Graminoids Invaded	
AGR-CRI	*Agropyron cristatum*
BRO-SPP	*Bromus* sp.
BRO-TEC	*Bromus tectorum*
KOE-SPP	*Koeleria* sp.
PHL-PRA	*Phleum pratense*
POA-SPP	*Poa* sp.
SIT-HYS	*Sitanion hystrix*
UKN-GRA	Unknown grass
Forbs Planted	
AST-CIC	*Astragalus cicer*
CHR-LEU	*Chrysanthemum leucanthemum*
HED-UTA	*Hedysarum utahensis*
LIN-LEW	*Linum lewisii*
MEL-OFF	*Melilotus officinalis* var. *Madrid*
PEN-STR	*Penstemon strictus* var. *bandera*

Species List for R3 Experimental Revegetation Studies (continued)

Abbreviation	Generic Names
Forbs Invaded	
AST-SPP	Astragalus sp.
AST-TEG	Astragalus tegetarius
CRY-SER	Cryptantha sericea
CHA-DOU	Chaenactis douglasii
CHE-SPP	Chenopodium sp.
HAL-GLO	Halogeton glomeratus
HAP-NUT	Haplopappus nuttallii
KOC-SCO	Kochia scoparia
PHY-FLO	Physaria floribunda
SAL-KAL	Salsola kali
SEN-MUL	Senecio multilobatus
SPH-COC*	Sphaeralcea coccinea
TAR-OFF	Taraxocum officinale
UNK-FOR	Unknown forb
UNK-SPP	Unknown forb
Shrubs Planted	
AME-ALN	Amelanchier alnifolia
ART-TRI*	Artemisia tridentata
ATR-BON*	Atriplex bonnevillensis
ATR-CAN**	Atriplex canescens
ATR-GAR*	Atriplex gardneri
CAM-MON*	Camphorosma monospeliaca
CER-MON**	Cercocarpus montanus
CHY-NAU**	Chrysothamnus nauseosus
EUR-LAN**	Eurotia lanata
KOC-PRO*	Kochia prostrata
PUR-TRI**	Purshia tridentata
RHU-TRI**	Rhus trilobata

Species List for R3 Experimental Revegetation Studies (continued)

Abbreviation	Generic Names
Shrubs Invaded	
CHY-SPP	Chrysothamnus sp.
CHY-VIS	Chrysothamnus viscidiflorus
Trees Planted	
PIN-EDU**	Pinus edulis

* represents species planted as tubeling

** represents species planted from seed and as tubeling

1979 REVEGETATION COVER DATA

SUBSTRAT=NO PROCESS SHALE MULCH=NONE SEEDING=LOW

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
1	AST-CIC	F		1	4	0	6	0	1	2.0000
2	LIN-LEW	F		0	0	0	0	1	0	0.1667
3	MEL-OFF	F		0	0	0	0	0	0	0.0000
4	SAL-KAL	F	I	0	0	1	0	0	2	0.5000
5	UNK-FOR	F	I	0	1	0	0	0	0	0.1667
6	AGR-SPP	G		25	15	15	13	10	12	15.0000
7	AGR-TRI	G		5	10	1	2	20	2	6.6667
8	BRO-INE	G		0	1	3	0	0	2	1.0000
9	BRO-TEC	G	I	0	0	0	1	0	2	0.5000
10	ORY-HYM	G		1	3	5	0	1	2	2.0000
11	STI-VIR	G		2	0	0	0	1	0	0.5000
12	ATR-CAN	S		8	3	0	6	3	0	3.3333
13	CER-MON	S		0	0	0	0	0	0	0.0000
14	EUR-LAN	S		10	3	12	12	5	0	7.0000
15	KOC-PRO	S		0	12	0	0	0	0	2.0000
16	PUR-TRI	S		0	1	0	0	0	0	0.1667

1979 REVEGETATION COVER DATA

SUBSTRAT=NO PROCESS SHALE MULCH=NONE SEEDING=MEDIUM

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
17	AST-CIC	F		0	1	5	4	9	3	3.6667
18	LIN-LEW	F		0	0	0	0	0	0	0.0000
19	MEL-OFF	F		0	0	0	0	0	0	0.0000
20	SAL-KAL	F	I	0	0	0	0	1	0	0.1667
21	UNK-FOR	F	I	0	0	0	2	0	0	0.3333
22	AGR-SPP	G		20	30	5	15	5	10	14.1667
23	AGR-TRI	G		5	5	14	3	5	8	6.6667
24	BRO-INE	G		0	0	2	0	0	0	0.3333
25	BRO-TEC	G	I	0	0	0	0	0	0	0.0000
26	ORY-HYM	G		1	1	2	0	3	1	1.3333
27	SIT-HYS	G	I	0	0	0	0	2	0	0.3333
28	STI-VIR	G		0	0	2	0	2	0	0.6667
29	ART-TRI	S		0	4	0	0	0	0	0.6667
30	ATR-CAN	S		2	0	0	0	1	10	2.1667
31	ATR-GAR	S		0	0	0	0	0	0	0.0000
32	EUR-LAN	S		10	5	7	13	5	3	7.1667
33	PUR-TRI	S		0	0	0	1	2	0	0.5000

1979 REVEGETATION COVER DATA

SUBSTRAT=NO PROCESS SHALE MULCH=NONE SEEDING=HIGH

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
34	AST-CIC	F		0	0	1	2	1	1	0.8333
35	LIN-LEW	F		0	0	0	1	1	3	0.8333
36	MEL-OFF	F		0	0	0	0	0	0	0.0000
37	SAL-KAL	F	I	0	0	0	0	0	0	0.0000
38	UNK-FOR	F	I	0	0	0	1	0	0	0.1667
39	AGR-SPP	G		30	25	30	15	15	20	22.5000
40	AGR-TRI	G		10	8	10	15	10	5	9.6667
41	BRO-INE	G		0	0	0	1	2	2	0.8333
42	BRO-TEC	G	I	0	0	0	0	0	1	0.1667
43	ORY-HYM	G		4	3	3	3	2	2	2.8333
44	ATR-BON	S		4	0	0	0	0	0	0.6667
45	ATR-CAN	S		8	2	5	4	2	10	5.1667
46	EUR-LAN	S		10	15	13	10	14	15	12.8333
47	PUR-TRI	S		0	0	0	1	0	0	0.1667

1979 REVEGETATION COVER DATA

SUBSTRAT=NO PROCESS SHALE MULCH=HYDRO SEEDING=LOW

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
48	AST-CIC	F		6	5	6	2	18	0	6.16667
49	MEL-OFF	F		0	0	0	0	0	0	0.00000
50	SAL-KAL	F	I	0	6	3	1	0	2	2.00000
51	AGR-CRI	G	I	2	0	3	6	9	0	3.33333
52	AGR-SPP	G		6	5	0	8	15	10	7.33333
53	AGR-TRI	G		6	5	8	0	0	0	3.16667
54	BRO-INE	G		1	2	1	3	2	0	1.50000
55	BRO-TEC	G	I	0	4	0	0	0	0	0.66667
56	ORY-HYM	G		1	0	3	1	0	0	0.83333
57	STI-VIR	G		0	3	4	4	4	6	3.50000
58	ART-TRI	S		0	0	0	0	14	0	2.33333
59	ATR-BON	S		0	0	20	0	0	0	3.33333
60	ATR-CAN	S		7	20	0	0	0	20	7.83333
61	PUR-TRI	S		1	0	0	0	1	2	0.66667

1979 REVEGETATION COVER DATA

SUBSTRAT=NO PROCESS SHALE MULCH=HYDRO SEEDING=MEDIUM

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
62	AST-CIC	F		5	5	10	2	2	1	4.1667
63	LIN-LEW	F		0	2	0	1	0	0	0.5000
64	SAL-KAL	F	I	0	1	2	0	2	1	1.0000
65	UNK-FOR	F	I	0	0	0	1	0	0	0.1667
66	AGR-CRI	G	I	0	0	0	0	2	0	0.3333
67	AGR-SPP	G		15	10	15	20	15	15	15.0000
68	AGR-TRI	G		10	8	5	5	5	5	6.3333
69	BRO-INE	G		1	0	1	0	2	0	0.6667
70	BRO-TEC	G	I	0	0	0	0	0	0	0.0000
71	ORY-HYM	G		0	2	1	0	0	0	0.5000
72	STI-VIR	G		3	2	2	1	1	3	2.0000
73	ATR-CAN	S		1	0	10	4	0	0	2.5000
74	EUR-LAN	S		15	20	10	15	18	20	16.3333
75	KOC-PRO	S		0	0	0	0	20	0	3.3333
76	PUR-TRI	S		0	0	0	0	0	1	0.1667

1979 REVEGETATION COVER DATA

SUBSTRAT=NO PROCESS SHALE MULCH=HYDRO SEEDING=HIGH

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
77	AST-CIC	F		1	0	1	1	0	1	0.6667
78	CRY-SER	F	I	0	0	0	0	0	0	0.0000
79	MEL-OFF	F		0	0	0	0	0	0	0.0000
80	SAL-KAL	F	I	1	0	0	0	0	0	0.1667
81	SPH-COC	F	I	1	0	0	0	0	0	0.1667
82	UNK-FOR	F	I	0	0	0	0	0	0	0.0000
83	AGR-SPP	G		15	20	35	35	25	25	25.8333
84	AGR-TRI	G		15	10	2	5	10	15	9.5000
85	BRO-INE	G		1	1	1	1	1	1	1.0000
86	BRO-TEC	G	I	0	0	0	0	0	1	0.1667
87	ORY-HYM	G		3	1	3	3	1	2	2.1667
88	AME-ALN	S		0	0	0	0	0	0	0.0000
89	ATR-CAN	S		5	3	10	5	5	5	5.5000
90	CHR-NAU	S		0	0	5	0	0	0	0.8333
91	EUR-LAN	S		5	10	10	12	15	30	13.6667
92	PUR-TRI	S		0	0	1	0	0	0	0.1667

1979 REVEGETATION COVER DATA

SUBSTRAT=NO PROCESS SHALE MULCH=STRAW SEEDING=LOW

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
93	AST-CIC	F		6	2	1	13	2	6	5.0000
94	CRY-SER	F	I	0	0	1	0	0	0	0.1667
95	LIN-LEW	F		2	0	0	0	0	0	0.3333
96	MEL-OFF	F		0	0	0	0	0	0	0.0000
97	SAL-KAL	F	I	0	0	0	2	1	5	1.3333
98	UNK-FOR	F	I	0	0	0	0	0	0	0.0000
99	AGR-CRI	G	I	2	3	2	0	0	0	1.1667
100	AGR-SPP	G		20	15	10	10	15	15	14.1667
101	AGR-TRI	G		0	5	10	5	0	3	3.8333
102	BRO-INE	G		2	2	2	1	0	2	1.5000
103	BRO-TEC	G	I	0	2	4	5	3	0	2.3333
104	ORY-HYM	G		2	0	5	0	1	2	1.6667
105	TRI-SPI	G	I	0	0	0	2	0	0	0.3333
106	ATR-NUT	S		0	0	0	0	30	0	5.0000
107	ATR-CAN	S		1	0	8	8	15	0	5.3333
108	CAM-MON	S		1	0	0	0	0	0	0.1667
109	CHR-NAU	S		0	0	7	0	0	0	1.1667
110	EUR-LAN	S		3	4	0	0	2	15	4.0000
111	PUR-TRI	S		0	0	0	1	0	1	0.3333

1979 REVEGETATION COVER DATA

SUBSTRAT=NO PROCESS SHALE MULCH=STRAW SEEDING=MEDIUM

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
112	AST-CIC	F		3	1	12	2	4	7	4.8333
113	LIN-LEW	F		0	0	1	0	1	0	0.3333
114	MEL-OFF	F		0	0	0	1	0	0	0.1667
115	PHY-FLO	F	I	0	0	0	0	0	0	0.0000
116	SAL-KAL	F	I	0	0	0	0	1	0	0.1667
117	UNK-FOR	F	I	0	0	0	0	0	0	0.0000
118	AGR-CRI	G	I	2	3	0	0	0	0	0.8333
119	AGR-SPP	G		25	20	25	30	15	25	23.3333
120	AGR-TRI	G		5	3	8	8	5	5	5.6667
121	BRO-INE	G		0	1	1	2	2	1	1.1667
122	BRO-TEC	G	I	0	1	0	1	0	0	0.3333
123	ORY-HYM	G		3	0	1	3	5	2	2.3333
124	STI-VIR	G		1	1	0	0	5	0	1.1667
125	ATR-CAN	S		0	10	0	10	0	10	5.0000
126	EUR-LAN	S		3	20	9	14	17	3	11.0000
127	PUR-TRI	S		0	0	1	0	4	0	0.8333

1979 REVEGETATION COVER DATA

SUBSTRAT=NO PROCESS SHALE MULCH=STRAW SEEDING=HIGH

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
128	AST-CIC	F		3	1	1	3	2	1	1.8333
129	LIN-LEW	F		0	0	1	0	0	0	0.1667
130	MEL-OFF	F		0	0	0	0	0	0	0.0000
131	SAL-KAL	F	I	0	0	0	1	0	0	0.1667
132	UNK-FOR	F	I	0	0	0	0	0	0	0.0000
133	AGR-SPP	G		15	25	25	20	20	25	21.6667
134	AGR-TRI	G		2	1	10	20	15	15	10.5000
135	BRO-INE	G		3	2	3	2	2	2	2.3333
136	BRO-TEC	G	I	0	0	0	0	0	0	0.0000
137	ORY-HYM	G		3	1	4	2	4	5	3.1667
138	ATR-CAN	S		5	4	5	4	6	10	5.6667
139	EUR-LAN	S		10	7	5	5	10	12	8.1667
140	KOC-PRO	S		0	0	8	0	0	0	1.3333
141	PUR-TRI	S		1	1	1	0	1	0	0.6667

SUBSTRAT=PROCESS SHALE MULCH=NONE SEEDING=LOW

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
142	AST-CIC	F		1	4	1	2	0	3	1.8333
143	MEL-OFF	F		0	0	0	0	0	0	0.0000
144	SAL-KAL	F	I	0	5	0	8	0	1	2.3333
145	UNK-FOR	F	I	0	0	1	0	0	1	0.3333
146	AGR-CRI	G	I	10	7	1	0	0	0	3.0000
147	AGR-SPP	G		10	5	15	15	18	8	11.8333
148	AGR-TRI	G		8	2	5	5	5	1	4.3333
149	BRO-INE	G		1	0	1	0	1	8	1.8333
150	BRO-TEC	G	I	0	4	5	0	0	10	3.1667
151	ORY-HYM	G		0	0	3	2	2	1	1.3333
152	ATR-CAN	S		0	2	12	0	0	25	6.5000
153	EUR-LAN	S		15	8	10	0	18	0	8.5000

SUBSTRAT=PROCESS SHALE MULCH=NONE SEEDING=MEDIUM

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
154	AST-CIC	F		2	0	15	1	5	0	3.8333
155	MEL-OFF	F		0	0	0	0	0	0	0.0000
156	SAL-KAL	F	I	1	0	2	1	1	1	1.0000
157	UNK-FOR	F	I	0	0	1	1	0	0	0.3333
158	AGR-SPP	G		20	25	10	18	10	20	17.1667
159	AGR-TRI	G		10	8	0	12	12	12	9.0000
160	BRO-INE	G		0	2	1	0	2	1	1.0000
161	BRO-TEC	G	I	0	0	0	0	0	0	0.0000
162	ORY-HYM	G		2	3	3	1	3	12	4.0000
163	ATR-CAN	S		0	5	0	0	10	15	5.0000
164	CAM-MON	S		0	0	4	0	0	0	0.6667
165	CHR-NAU	S		3	0	0	0	0	0	0.5000
166	EUR-LAN	S		15	8	0	10	14	5	8.6667
167	PUR-TRI	S		0	0	0	0	0	0	0.0000

SUBSTRAT=PROCESS SHALE MULCH=NONE SEEDING=HIGH

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
168	AST-CIC	F		2	2	0	0	0	0	0.6667
169	LIN-LEW	F		0	1	0	0	0	0	0.1667
170	SAL-KAL	F	I	0	0	0	0	0	0	0.0000
171	UNK-FOR	F	I	0	0	1	0	0	0	0.1667
172	AGR-SPP	G		11	13	25	15	25	10	16.5000
173	AGR-TRI	G		5	0	10	5	5	8	5.5000
174	BRO-INE	G		1	1	1	0	0	0	0.5000
175	BRO-TEC	G	I	0	0	0	0	0	0	0.0000
176	ORY-HYM	G		5	3	2	10	5	3	4.6667
177	AME-ALN	S		0	0	0	0	0	0	0.0000
178	ATR-CAN	S		10	20	15	5	8	4	10.3333
179	CHR-NAU	S		5	0	0	0	0	0	0.8333
180	EUR-LAN	S		14	10	30	18	10	15	16.1667
181	PUR-TRI	S		1	0	0	0	0	0	0.1667

SUBSTRAT=PROCESS SHALE MULCH=HYDRO SEEDING=LOW

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
182	AST-CIC	F		3	3	1	3	2	0	2.0000
183	LIN-LEW	F		0	2	0	0	0	1	0.5000
184	MEL-OFF	F		0	0	0	0	0	0	0.0000
185	SAL-KAL	F	I	1	5	1	1	0	0	1.3333
186	UNK-FOR	F	I	0	0	0	0	0	1	0.1667
187	AGR-SPP	G		18	14	20	5	12	15	14.0000
188	AGR-TRI	G		5	10	3	10	10	5	7.1667
189	BRO-INE	G		2	2	1	1	3	0	1.5000
190	BRO-TEC	G	I	0	0	0	0	0	0	0.0000
191	ORY-HYM	G		4	8	2	4	2	1	3.5000
192	STI-VIR	G		1	10	0	0	1	0	2.0000
193	ART-TRI	S		0	0	3	0	0	0	0.5000
194	ATR-CAN	S		0	0	0	0	0	3	0.5000
195	CHR-NAU	S		0	0	0	0	0	5	0.8333
196	EUR-LAN	S		12	0	20	3	0	15	8.3333
197	KOC-PRO	S		0	0	0	0	10	0	1.6667
198	PUR-TRI	S		0	0	1	1	0	0	0.3333

SUBSTRAT=PROCESS SHALE MULCH=HYDRO SEEDING=MEDIUM

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
199	AST-CIC	F		2	5	2	2	5	3	3.1667
200	LIN-LEW	F		0	0	0	0	0	0	0.0000
201	SAL-KAL	F	I	1	0	1	0	1	1	0.6667
202	SPH-COC	F	I	0	0	0	2	0	0	0.3333
203	AGR-SPP	G		15	15	10	20	20	20	16.6667
204	AGR-TRI	G		8	8	5	10	15	15	10.1667
205	BRO-INE	G		2	5	4	3	1	0	2.5000
206	BRO-TEC	G	I	0	0	0	0	0	0	0.0000
207	ORY-HYM	G		1	2	1	2	3	2	1.8333
208	ATR-CAN	S		8	5	8	0	0	10	5.1667
209	ATR-GAR	S		0	0	0	3	0	0	0.5000
210	EUR-LAN	S		10	0	10	5	10	5	6.6667
211	PUR-TRI	S		1	0	0	0	0	0	0.1667

SUBSTRAT=PROCESS SHALE MULCH=HYDRO SEEDING=HIGH

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
212	AST-CIC	F		1	1	3	1	1	2	1.5000
213	MEL-OFF	F		0	0	0	0	0	0	0.0000
214	SAL-KAL	F	I	0	0	0	0	0	0	0.0000
215	AGR-SPP	G		20	35	20	15	15	30	22.5000
216	AGR-TRI	G		5	15	5	10	5	5	7.5000
217	BRO-INE	G		0	2	1	0	0	0	0.5000
218	BRO-TEC	G	I	0	0	0	0	0	0	0.0000
219	ORY-HYM	G		2	5	2	2	2	3	2.6667
220	ATR-CAN	S		18	5	45	15	10	8	16.8333
221	EUR-LAN	S		2	7	15	10	1	10	7.5000
222	KOC-PRO	S		0	25	0	0	0	0	4.1667
223	PUR-TRI	S		1	0	0	0	0	1	0.3333

SUBSTRAT=PROCESS SHALE MULCH=STRAW SEEDING=LOW

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
224	AST-CIC	F		3	2	0	6	2	3	2.6667
225	CHE-SPP	F	I	0	0	0	0	0	0	0.0000
226	MEL-OFF	F		1	0	1	0	0	0	0.3333
227	SAL-KAL	F	I	1	6	2	0	0	0	1.5000
228	AGR-CRI	G	I	5	8	0	2	4	8	4.4000
229	AGR-SPP	G		15	2	15	30	20	12	15.6667
230	AGR-TRI	G		0	0	8	4	10	10	5.3333
231	BRO-INE	G		5	0	6	3	2	5	3.5000
232	BRO-TEC	G	I	0	2	0	0	1	0	0.5000
233	ORY-HYM	G		10	0	5	3	2	2	3.6667
234	ATR-CAN	S		0	2	0	0	1	15	3.0000
235	CHR-NAU	S		0	0	30	0	10	0	6.6667
236	EUR-LAN	S		0	0	0	0	1	0	0.1667
237	PUR-TRI	S		0	0	1	1	0	0	0.3333

SUBSTRAT=PROCESS SHALE MULCH=STRAW SEEDING=MEDIUM

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
238	AST-CIC	F		2	4	5	1	5	20	6.1667
239	CHE-SPP	F	I	0	0	0	0	0	0	0.0000
240	LIN-LEW	F		0	0	0	2	0	0	0.3333
241	MEL-OFF	F		0	0	0	0	0	0	0.0000
242	SAL-KAL	F	I	1	0	1	0	0	0	0.3333
243	UNK-FOR	F	I	0	0	2	0	0	0	0.3333
244	AGR-CRI	G	I	3	20	15	0	0	0	6.3333
245	AGR-SPP	G		15	10	5	18	15	20	13.8333
246	AGR-TRI	G		8	0	12	2	8	10	6.6667
247	BRO-INE	G		1	5	3	0	2	3	2.3333
248	BRO-TEC	G	I	0	0	0	0	1	0	0.1667
249	ORY-HYM	G		2	0	2	1	2	0	1.1667
250	ATR-CAN	S		0	5	0	2	20	15	7.0000
251	EUR-LAN	S		5	0	0	10	12	10	6.1667
252	PUR-TRI	S		1	1	0	0	0	1	0.5000

SUBSTRAT=PROCESS SHALE MULCH=STRAW SEEDING=HIGH

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1C	SUBPL_2C	SUBPL_3C	SUBPL_4C	SUBPL_5C	SUBPL_6C	MEAN_COV
253	AST-CIC	F		4	0	1	2	8	3	3.0000
254	LIN-LEW	F		0	0	1	0	0	0	0.1667
255	MEL-OFF	F		0	0	0	0	0	0	0.0000
256	PHY-FLO	F	I	0	0	0	0	0	0	0.0000
257	SAL-KAL	F	I	0	0	0	0	5	0	0.8333
258	AGR-SPP	G		20	23	15	20	17	25	20.0000
259	AGR-TRI	G		15	15	15	10	15	10	13.3333
260	BRO-INE	G		1	1	2	1	2	2	1.5000
261	BRO-TEC	G	I	0	0	0	0	0	0	0.0000
262	ORY-HYM	G		5	8	10	5	5	3	6.0000
263	ATR-CAN	S		0	18	5	8	15	10	9.3333
264	EUR-LAN	S		15	2	20	15	18	5	12.5000
265	PUR-TRI	S		1	0	1	1	1	0	0.6667

APPENDIX 6-2.2

Statistical Comparison (t-test) of 1978 and 1979 Cover Data from RBOSC Revegetation Studies at Site R3, Tract C-a

Total Cover and Cover by Growth Form

TTEST PROCEDURE

VARIABLE: TOTAL

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	108	29.14814815	6.64755568	0.63966134	15.00000000	45.00000000	UNEQUAL	-15.1062	154.2	0.0001
79	108	51.39814815	13.78807545	1.32675818	22.00000000	95.00000000	EQUAL	-15.1062	214.0	0.0001

FOR H0: VARIANCES ARE EQUAL, F'= 4.30 WITH 107 AND 107 DF PROB > F'= 0.0001

VARIABLE: GRASS

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	108	16.32962963	6.04417166	0.58160069	5.00000000	33.00000000	UNEQUAL	-13.6161	189.1	0.0001
79	108	30.36111111	8.84070697	0.85069742	12.00000000	57.00000000	EQUAL	-13.6161	214.0	0.0001

FOR H0: VARIANCES ARE EQUAL, F'= 2.14 WITH 107 AND 107 DF PROB > F'= 0.0001

VARIABLE: FORBS

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	108	5.60740741	4.04428069	0.38916109	0	19.10000000	UNEQUAL	2.6744	214.0	0.0081
79	108	4.12962963	4.07658597	0.39226967	0	20.00000000	EQUAL	2.6744	214.0	0.0081

FOR H0: VARIANCES ARE EQUAL, F'= 1.02 WITH 107 AND 107 DF PROB > F'= 0.9345

VARIABLE: TREES

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	108	0	0	0	0	0	UNEQUAL	.	.	.
79	108	0	0	0	0	0	EQUAL	.	214.0	.

NOTE: ALL VALUES ARE THE SAME FOR ONE CLASS LEVEL.

VARIABLE: SHRUBS

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	108	7.10000000	3.78169236	0.36389256	0	18.10000000	UNEQUAL	-9.2327	135.0	0.0001
79	108	16.90740741	10.37118315	0.99796756	0	60.00000000	EQUAL	-9.2327	214.0	0.0001

FOR H0: VARIANCES ARE EQUAL, F'= 7.52 WITH 107 AND 107 DF PROB > F'= 0.0001

Cover by Individual Species

TTEST PROCEDURE

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	12	2.09166667	1.77121342	0.51130527	0.10000000	7.00000000	UNEQUAL	-0.7424	46.0	0.4616
79	41	2.73170732	4.44423441	0.69407281	0.00000000	20.00000000	EQUAL	-0.4850	51.0	0.6298

FOR HO: VARIANCES ARE EQUAL, F'= 6.30 WITH 40 AND 11 DF PROB > F'= 0.0023

---------- SPECIES=AGR-SPP ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	106	7.17924528	3.42483137	0.33264903	2.00000000	17.00000000	UNEQUAL	-12.7958	153.2	0.0001
79	108	17.06481481	7.24636312	0.69728162	0.00000000	35.00000000	EQUAL	-12.7197	212.0	0.0001

FOR HO: VARIANCES ARE EQUAL, F'= 4.48 WITH 107 AND 105 DF PROB > F'= 0.0001

---------- SPECIES=AGR-TRI ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	87	3.16206897	1.60350208	0.17191347	0.10000000	8.00000000	UNEQUAL	-8.4690	136.3	0.0001
79	108	7.27777778	4.72383761	0.45455149	0.00000000	20.00000000	EQUAL	-7.7707	193.0	0.0001

FOR HO: VARIANCES ARE EQUAL, F'= 8.68 WITH 107 AND 86 DF PROB > F'= 0.0001

---------- SPECIES=ART-TRI ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	3	1.66666667	1.15470054	0.66666667	1.00000000	3.00000000	UNEQUAL	0.4797	9.6	0.6422
79	18	1.16666667	3.39982699	0.80134691	0.00000000	14.00000000	EQUAL	0.2476	19.0	0.8071

FOR HO: VARIANCES ARE EQUAL, F'= 8.67 WITH 17 AND 2 DF PROB > F'= 0.2165

---------- SPECIES=AST-CIC ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	67	1.15373134	0.74819548	0.09140663	0.10000000	3.00000000	UNEQUAL	-5.2219	121.9	0.0001
79	108	3.00000000	3.54938457	0.34153969	0.00000000	20.00000000	EQUAL	-4.1960	173.0	0.0001

FOR HO: VARIANCES ARE EQUAL, F'= 22.50 WITH 107 AND 66 DF PROB > F'= 0.0001

TTEST PROCEDURE

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	3	5.00000000	1.00000000	0.57735027	4.00000000	6.00000000	UNEQUAL	0.9872	18.9	0.3360
79	18	3.00000000	8.23907476	1.94196855	0.00000000	30.00000000	EQUAL	0.4112	19.0	0.6856

FOR HO: VARIANCES ARE EQUAL, F'= 67.88 WITH 17 AND 2 DF PROB > F'= 0.0292

---------- SPECIES=ATR-CAN ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	76	3.36842105	2.24405648	0.25741093	1.00000000	13.00000000	UNEQUAL	-3.4843	136.0	0.0007
79	108	5.89814815	7.05510992	0.67887827	0.00000000	45.00000000	EQUAL	-3.0182	182.0	0.0029

FOR HO: VARIANCES ARE EQUAL, F'= 9.88 WITH 107 AND 75 DF PROB > F'= 0.0001

---------- SPECIES=ATR-GAR ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	2	0.55000000	0.63639610	0.45000000	0.10000000	1.00000000	UNEQUAL	0.5828	1.7	0.6326
79	12	0.25000000	0.86602540	0.25000000	0.00000000	3.00000000	EQUAL	0.4625	12.0	0.6520

FOR HO: VARIANCES ARE EQUAL, F'= 1.85 WITH 11 AND 1 DF PROB > F'= 1.0000

---------- SPECIES=BRO-INE ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	101	3.64455446	2.16898480	0.21582205	0.10000000	14.00000000	UNEQUAL	8.6730	172.7	0.0001
79	108	1.41666667	1.44768587	0.13930364	0.00000000	8.00000000	EQUAL	8.7858	207.0	0.0001

FOR HO: VARIANCES ARE EQUAL, F'= 2.24 WITH 100 AND 107 DF PROB > F'= 0.0001

---------- SPECIES=BRO-TEC ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	4	1.25000000	0.50000000	0.25000000	1.00000000	2.00000000	UNEQUAL	2.8443	4.9	0.0368
79	108	0.44444444	1.38303022	0.13308214	0.00000000	10.00000000	EQUAL	1.1577	110.0	0.2495

FOR HO: VARIANCES ARE EQUAL, F'= 7.65 WITH 107 AND 3 DF PROB > F'= 0.1246

TTEST PROCEDURE

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	3	1.66666667	1.15470054	0.66666667	1.00000000	3.00000000	UNEQUAL	1.6742	3.1	0.1901
79	12	0.41666667	1.16450015	0.33616224	0.00000000	4.00000000	EQUAL	1.6651	13.0	0.1198

FOR HO: VARIANCES ARE EQUAL, F'= 1.02 WITH 11 AND 2 DF PROB > F'= 1.0000

---------- SPECIES=CER-MON ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	7	0.37142857	0.71813250	0.27142857	0.10000000	2.00000000	UNEQUAL	1.3684	6.0	0.2202
79	6	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	EQUAL	1.2588	11.0	0.2342

NOTE: ALL VALUES ARE THE SAME FOR ONE CLASS LEVEL.

---------- SPECIES=CRY-SER ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	5	1.20000000	0.44721360	0.20000000	1.00000000	2.00000000	UNEQUAL	5.1538	5.4	0.0029
79	12	0.08333333	0.28867513	0.08333333	0.00000000	1.00000000	EQUAL	6.2012	15.0	0.0001

FOR HO: VARIANCES ARE EQUAL, F'= 2.40 WITH 4 AND 11 DF PROB > F'= 0.2261

---------- SPECIES=EUR-LAN ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	87	4.75862069	2.40138292	0.25745527	1.00000000	14.00000000	UNEQUAL	-6.1025	130.1	0.0001
79	102	9.10784314	6.71175541	0.66456281	0.00000000	30.00000000	EQUAL	-5.7372	187.0	0.0001

FOR HO: VARIANCES ARE EQUAL, F'= 7.81 WITH 101 AND 86 DF PROB > F'= 0.0001

---------- SPECIES=KOC-PRO ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	6	4.16666667	1.16904519	0.47726070	3.00000000	6.00000000	UNEQUAL	1.3411	34.0	0.1888
79	30	2.50000000	6.28490254	1.14746097	0.00000000	25.00000000	EQUAL	0.6402	34.0	0.5264

FOR HO: VARIANCES ARE EQUAL, F'= 28.90 WITH 29 AND 5 DF PROB > F'= 0.0014

TTEST PROCEDURE

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	22	1.18636364	0.49018505	0.10450780	0.10000000	2.00000000	UNEQUAL	6.9504	44.8	0.0001
79	72	0.29166667	0.63772262	0.07515633	0.00000000	3.00000000	EQUAL	6.0485	92.0	0.0001

FOR HO: VARIANCES ARE EQUAL, F'= 1.69 WITH 71 AND 21 DF PROB > F'= 0.1762

---------- SPECIES=MEL-OFF ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	98	4.32142857	3.27584883	0.33091070	0.10000000	17.00000000	UNEQUAL	12.9371	97.6	0.0001
79	90	0.03333333	0.18051113	0.01902754	0.00000000	1.00000000	EQUAL	12.3983	186.0	0.0001

FOR HO: VARIANCES ARE EQUAL, F'= 329.34 WITH 97 AND 89 DF PROB > F'= 0.0001

---------- SPECIES=ORY-HYM ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	94	3.10638298	2.27406171	0.23455156	1.00000000	15.00000000	UNEQUAL	1.7693	196.5	0.0784
79	108	2.53703704	2.28945541	0.22030295	0.00000000	12.00000000	EQUAL	1.7685	200.0	0.0785

FOR HO: VARIANCES ARE EQUAL, F'= 1.01 WITH 107 AND 93 DF PROB > F'= 0.9502

---------- SPECIES=PHY-FLO ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	10	0.74000000	0.62928531	0.19899749	0.10000000	2.00000000	UNEQUAL	3.7186	9.0	0.0048
79	12	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	EQUAL	4.0941	20.0	0.0006

NOTE: ALL VALUES ARE THE SAME FOR ONE CLASS LEVEL.

---------- SPECIES=PUR-TRI ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	42	0.66904762	0.65163513	0.10054948	0.10000000	2.00000000	UNEQUAL	2.5932	73.8	0.0115
79	102	0.36274510	0.62599174	0.06198242	0.00000000	4.00000000	EQUAL	2.6372	142.0	0.0093

FOR HO: VARIANCES ARE EQUAL, F'= 1.08 WITH 41 AND 101 DF PROB > F'= 0.7307

REVEGETATION COVER COMPARISON 1978-1979
SPECIES=SAL-KAL

TTEST PROCEDURE

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	31	1.31612903	1.41870757	0.25480740	0.10000000	7.00000000	UNEQUAL	1.9376	50.5	0.0583
79	108	0.75000000	1.48591518	0.14298225	0.00000000	8.00000000	EQUAL	1.8882	137.0	0.0611

FOR HO: VARIANCES ARE EQUAL, F'= 1.10 WITH 107 AND 30 DF PROB > F'= 0.7965

---------- SPECIES=SIT-HYS ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	1	2.00000000	.	.	2.00000000	2.00000000	UNEQUAL	.	.	.
79	6	0.33333333	0.81649658	0.33333333	0.00000000	2.00000000	EQUAL	1.8898	5.0	0.1174

NOTE: ALL VALUES ARE THE SAME FOR ONE CLASS LEVEL.

---------- SPECIES=STI-VIR ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	22	1.37727273	0.82515904	0.17592450	0.10000000	3.00000000	UNEQUAL	-0.6481	48.9	0.5199
79	36	1.63888889	2.17981359	0.36330227	0.00000000	10.00000000	EQUAL	-0.5383	56.0	0.5925

FOR HO: VARIANCES ARE EQUAL, F'= 6.98 WITH 35 AND 21 DF PROB > F'= 0.0001

---------- SPECIES=UNK-FOR ----------

VARIABLE: COVER

YEAR	N	MEAN	STD DEV	STD ERROR	MINIMUM	MAXIMUM	VARIANCES	T	DF	PROB > |T|
78	2	1.50000000	0.70710678	0.50000000	1.00000000	2.00000000	UNEQUAL	2.6536	1.0	0.2272
79	78	0.16666667	0.43890852	0.04969660	0.00000000	2.00000000	EQUAL	4.1994	78.0	0.0001

FOR HO: VARIANCES ARE EQUAL, F'= 2.60 WITH 1 AND 77 DF PROB > F'= 0.2225

APPENDIX 6-2.3

Analysis of Variance for Cover Data from RBOSC 1979 Revegetation Studies at Site R3, Tract C-a

1979 REVEGETATION COVER DATA

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN DATA SET = 108

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: GRASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	3387.08333333	199.24019608	3.60	0.0001	0.405012	24.4903
ERROR	90	4975.83333333	55.28703704		STD DEV		GRASS MEAN
CORRECTED TOTAL	107	8362.91666667			7.43552534		30.36111111

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	60.75000000	1.10	0.2973
SEEDING	2	1653.16666667	14.95	0.0001
MULCH	2	568.38888889	5.14	0.0077
SUBSTRAT*SEEDING	2	382.38888889	3.46	0.0357
SUBSTRAT*MULCH	2	54.16666667	0.49	0.6143
SEEDING*MULCH	4	112.11111111	0.51	0.7307
SUBSTRA*SEEDIN*MULCH	4	556.11111111	2.51	0.0470

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	568.38888889	10.49	0.0870

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	1653.16666667	4.32	0.1879

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	112.11111111	0.20	0.9250

1979 REVEGETATION COVER DATA

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: FORBS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V
MODEL	17	457.85185185	26.93246187	1.84	0.0351	0.257483	92.749
ERROR	90	1320.33333333	14.67037037		STD DEV		FORBS MEA
CORRECTED TOTAL	107	1778.18518519			3.83019195		4.1296296

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	1.81481481	0.12	0.7259
SEEDING	2	265.12962963	9.04	0.0003
MULCH	2	56.90740741	1.94	0.1497
SUBSTRAT*SEEDING	2	24.79629630	0.85	0.4329
SUBSTRAT*MULCH	2	31.35185185	1.07	0.3478
SEEDING*MULCH	4	26.48148148	0.45	0.7712
SUBSTRA*SEEDIN*MULCH	4	51.37037037	0.88	0.4820

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	56.90740741	1.82	0.3552

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	265.12962963	10.69	0.0855

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	26.48148148	0.52	0.7316

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: SHRUBS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	3031.40740741	178.31808279	1.89	0.0285	0.263393	57.4037
ERROR	90	8477.66666667	94.19629630		STD DEV		SHRUBS MEAN
CORRECTED TOTAL	107	11509.07407407			9.70547764		16.90740741

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	33.33333333	0.35	0.5534
SEEDING	2	1614.29629630	8.57	0.0004
MULCH	2	122.79629630	0.65	0.5235
SUBSTRAT*SEEDING	2	646.22222222	3.43	0.0367
SUBSTRAT*MULCH	2	222.38888889	1.18	0.3118
SEEDING*MULCH	4	200.98148148	0.53	0.7115
SUBSTRA*SEEDIN*MULCH	4	191.38888889	0.51	0.7300

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	122.79629630	0.55	0.6443

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	1614.29629630	2.50	0.2859

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	200.98148148	1.05	0.4817

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: TREES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	0	0	99999.99	0.0000	0.000000	99999.9999
ERROR	90	0	0		STD DEV		TREES MEAN
CORRECTED TOTAL	107	0			0		0

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0	.	.
SEEDING	2	0	.	.
MULCH	2	0	.	.
SUBSTRAT*SEEDING	2	0	.	.
SUBSTRAT*MULCH	2	0	.	.
SEEDING*MULCH	4	0	.	.
SUBSTRA*SEEDIN*MULCH	4	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	0	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: GRASS_I

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	532.29629630	31.31154684	3.98	0.0001	0.428938	184.7905
ERROR	90	708.66666667	7.87407407		STD DEV		GRASS_I MEAN
CORRECTED TOTAL	107	1240.96296296			2.80607806		1.51851852

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	13.37037037	1.70	0.1959
SEEDING	2	168.96296296	10.73	0.0001
MULCH	2	68.01851852	4.32	0.0162
SUBSTRAT*SEEDING	2	12.51851852	0.79	0.4548
SUBSTRAT*MULCH	2	65.68518519	4.17	0.0185
SEEDING*MULCH	4	64.48148148	2.05	0.0944
SUBSTRA*SEEDIN*MULCH	4	139.25925926	4.42	0.0026

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	68.01851852	1.04	0.4913

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	168.96296296	13.50	0.0690

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	64.48148148	0.46	0.7629

1979 REVEGETATION COVER DATA

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: FORBS_I

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	55.40740741	3.25925926	1.55	0.0964	0.226084	159.982
ERROR	90	189.66666667	2.10740741		STD DEV		FORBS_I MEA
CORRECTED TOTAL	107	245.07407407			1.45169122		0.9074074

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	3.00000000	1.42	0.2360
SEEDING	2	33.90740741	8.04	0.0006
MULCH	2	0.68518519	0.16	0.8502
SUBSTRAT*SEEDING	2	0.72222222	0.17	0.8428
SUBSTRAT*MULCH	2	7.38888889	1.75	0.1791
SEEDING*MULCH	4	3.48148148	0.41	0.7989
SUBSTRA*SEEDIN*MULCH	4	6.22222222	0.74	0.5684

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	0.68518519	0.09	0.9151

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	33.90740741	46.95	0.0209

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	3.48148148	0.56	0.7062

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: SHRUBS_I

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	0	0	99999.99	0.0000	0.000000	99999.9999
ERROR	90	0	0		STD DEV		SHRUBS_I MEAN
CORRECTED TOTAL	107	0			0		0

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0	.	.
SEEDING	2	0	.	.
MULCH	2	0	.	.
SUBSTRAT*SEEDING	2	0	.	.
SUBSTRAT*MULCH	2	0	.	.
SEEDING*MULCH	4	0	.	.
SUBSTRA*SEEDIN*MULCH	4	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	0	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: GRASS_P

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	4884.82407407	287.34259259	4.77	0.0001	0.474056	26.9044
ERROR	90	5419.50000000	60.21666667		STD DEV		GRASS_P MEAN
CORRECTED TOTAL	107	10304.32407407			7.75993986		28.84259259

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	17.12037037	0.28	0.5952
SEEDING	2	2843.57407407	23.61	0.0001
MULCH	2	282.29629630	2.34	0.1018
SUBSTRAT*SEEDING	2	294.24074074	2.44	0.0926
SUBSTRAT*MULCH	2	198.74074074	1.65	0.1978
SEEDING*MULCH	4	143.37037037	0.60	0.6670
SUBSTRA*SEEDIN*MULCH	4	1105.48148148	4.59	0.0020

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	282.29629630	1.42	0.4132

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	2843.57407407	9.66	0.0938

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	143.37037037	0.13	0.9635

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: FORBS_P

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	322.33333333	18.96078431	1.64	0.0701	0.236546	105.5139
ERROR	90	1040.33333333	11.55925926		STD DEV		FORBS_P MEAN
CORRECTED TOTAL	107	1362.66666667			3.39989107		3.22222222

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	9.48148148	0.82	0.3675
SEEDING	2	154.38888889	6.68	0.0020
MULCH	2	64.88888889	2.81	0.0657
SUBSTRAT*SEEDING	2	32.01851852	1.38	0.2556
SUBSTRAT*MULCH	2	10.29629630	0.45	0.6420
SEEDING*MULCH	4	26.88888889	0.58	0.6768
SUBSTRA*SEEDIN*MULCH	4	24.37037037	0.53	0.7161

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	64.88888889	6.30	0.1369

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	154.38888889	4.82	0.1718

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	26.88888889	1.10	0.4632

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: SHRUBS_P

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	3031.40740741	178.31808279	1.89	0.0285	0.263393	57.4037
ERROR	90	8477.66666667	94.19629630		STD DEV		SHRUBS_P MEAN
CORRECTED TOTAL	107	11509.07407407			9.70547764		16.90740741

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	33.33333333	0.35	0.5534
SEEDING	2	1614.29629630	8.57	0.0004
MULCH	2	122.79629630	0.65	0.5235
SUBSTRAT*SEEDING	2	646.22222222	3.43	0.0367
SUBSTRAT*MULCH	2	222.38888889	1.18	0.3118
SEEDING*MULCH	4	200.98148148	0.53	0.7115
SUBSTRA*SEEDIN*MULCH	4	191.38888889	0.51	0.7300

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	122.79629630	0.55	0.6443

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	1614.29629630	2.50	0.2859

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	200.98148148	1.05	0.4817

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: TREES_P

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	0	0	99999.99	0.0000	0.000000	99999.9999
ERROR	90	0	0		STD DEV		TREES_P MEAN
CORRECTED TOTAL	107	0			0		0

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0	.	.
SEEDING	2	0	.	.
MULCH	2	0	.	.
SUBSTRAT*SEEDING	2	0	.	.
SUBSTRAT*MULCH	2	0	.	.
SEEDING*MULCH	4	0	.	.
SUBSTRA*SEEDIN*MULCH	4	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	0	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: INVAD

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	793.40740741	46.67102397	4.58	0.0001	0.463870	131.5788
ERROR	90	917.00000000	10.18888889		STD DEV		INVAD MEAN
CORRECTED TOTAL	107	1710.40740741			3.19200390		2.42592593

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	29.03703704	2.85	0.0948
SEEDING	2	354.01851852	17.37	0.0001
MULCH	2	55.35185185	2.72	0.0715
SUBSTRAT*SEEDING	2	17.24074074	0.85	0.4325
SUBSTRAT*MULCH	2	111.90740741	5.49	0.0056
SEEDING*MULCH	4	40.87037037	1.00	0.4104
SUBSTRA*SEEDIN*MULCH	4	184.98148148	4.54	0.0022

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	55.35185185	0.49	0.6691

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	354.01851852	20.53	0.0464

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	40.87037037	0.22	0.9136

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: PLANTED

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	9115.41666667	536.20098039	3.11	0.0003	0.370140	26.0075
ERROR	90	15511.50000000	172.35000000		STD DEV		PLANTED MEAN
CORRECTED TOTAL	107	24626.91666667			13.12821389		48.97222222

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	46.67592593	0.27	0.6041
SEEDING	2	6987.72222222	20.27	0.0001
MULCH	2	545.38888889	1.58	0.2112
SUBSTRAT*SEEDING	2	175.24074074	0.51	0.6032
SUBSTRAT*MULCH	2	52.79629630	0.15	0.8582
SEEDING*MULCH	4	64.22222222	0.09	0.9844
SUBSTRA*SEEDIN*MULCH	4	1243.37037037	1.80	0.1351

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	545.38888889	10.33	0.0883

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	6987.72222222	39.87	0.0245

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	64.22222222	0.05	0.9930

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: TOTAL

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	6400.04629630	376.47331155	2.43	0.0037	0.314624	24.2154
ERROR	90	13941.83333333	154.90925926		STD DEV		TOTAL MEAN
CORRECTED TOTAL	107	20341.87962963			12.44625483		51.39814815

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	149.34259259	0.96	0.3288
SEEDING	2	4267.12962963	13.77	0.0001
MULCH	2	759.12962963	2.45	0.0920
SUBSTRAT*SEEDING	2	83.46296296	0.27	0.7645
SUBSTRAT*MULCH	2	131.68518519	0.43	0.6550
SEEDING*MULCH	4	174.53703704	0.28	0.8892
SUBSTRA*SEEDIN*MULCH	4	834.75925926	1.35	0.2587

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	759.12962963	5.76	0.1478

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	4267.12962963	51.13	0.0192

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	174.53703704	0.21	0.9206

APPENDIX 6-2.4

Analysis of Variance for Cover and Biomass Data for Individual Species from RBOSC 1979 Revegetation Studies at Site R3, Tract C-a

SPECIES=AGR-CRI

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	2	1 2
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 42

GROUP	OBS	DEPENDENT VARIABLES
1	41	COVER
2	42	BIOMASS

NOTE: VARIABLES IN EACH GROUP ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	6	165.18211382	27.53035230	1.50	0.2085	0.209078	156.9351
ERROR	34	624.86666667	18.37843137		STD DEV		COVER MEAN
CORRECTED TOTAL	40	790.04878049			4.28700727		2.73170732

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	100.09780010	5.45	0.0257
SEEDING	1	1.72269353	0.09	0.7613
MULCH	2	13.77341817	0.37	0.6903
SUBSTRAT*SEEDING	1	43.18283232	2.35	0.1346
SUBSTRAT*MULCH	0	13.78362283	.	.
SEEDING*MULCH	1	30.42388091	1.66	0.2069
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	13.77341817	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	1.72269353	0.04	0.8745

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	1	30.42388091	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	6	1129.06904762	188.17817460	1.16	0.3473	0.166411	186.6130
ERROR	35	5655.73500000	161.59242857		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	41	6784.80404762			12.71190106		6.81190476

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	715.47668651	4.43	0.0426
SEEDING	1	181.56001984	1.12	0.2964
MULCH	2	330.91696429	1.02	0.3697
SUBSTRAT*SEEDING	1	0.00000000	0.00	1.0000
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	1	97.94789683	0.61	0.4415
SUBSTRA*SEEDIN*MULCH	0	62.53890873	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	330.91696429	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	181.56001984	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	1	97.94789683	.	.

1979 REVEGETATION DATA
SPECIES=AGR-SPP

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 108

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	2248.37962963	132.25762527	3.53	0.0001	0.400171	35.8594
ERROR	90	3370.16666667	37.44629630		STD DEV		COVER MEAN
CORRECTED TOTAL	107	5618.54629630			6.11933790		17.06481481

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	39.12037037	1.04	0.3095
SEEDING	2	1307.90740741	17.46	0.0001
MULCH	2	67.79629630	0.91	0.4081
SUBSTRAT*SEEDING	2	130.24074074	1.74	0.1815
SUBSTRAT*MULCH	2	117.35185185	1.57	0.2143
SEEDING*MULCH	4	246.75925926	1.65	0.1693
SUBSTRA*SEEDIN*MULCH	4	339.20370370	2.26	0.0683

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	67.79629630	0.58	0.6338

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	1307.90740741	10.04	0.0906

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	246.75925926	0.73	0.6173

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	13037.77629630	766.92801743	1.99	0.0200	0.273171	37.5518
ERROR	90	34689.66666667	385.44074074		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	107	47727.44296296			19.63264477		52.28148148

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	310.76148148	0.81	0.3716
SEEDING	2	1881.08074074	2.44	0.0929
MULCH	2	554.93629630	0.72	0.4896
SUBSTRAT*SEEDING	2	3544.66740741	4.60	0.0125
SUBSTRAT*MULCH	2	554.45629630	0.72	0.4899
SEEDING*MULCH	4	1992.20592593	1.29	0.2791
SUBSTRA*SEEDIN*MULCH	4	4199.66814815	2.72	0.0342

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	554.93629630	1.00	0.4998

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	1881.08074074	0.53	0.6533

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	1992.20592593	0.47	0.7561

1979 REVEGETATION DATA
SPECIFS=AGR-TRI

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 108

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	708.33333333	41.66666667	2.23	0.0080	0.296663	59.3538
ERROR	90	1679.33333333	18.65925926		STD DEV		COVER MEAN
CORRECTED TOTAL	107	2387.66666667			4.31963647		7.27777778

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	16.33333333	0.88	0.3520
SEEDING	2	326.16666667	8.74	0.0003
MULCH	2	6.16666667	0.17	0.8479
SUBSTRAT*SEEDING	2	56.16666667	1.51	0.2275
SUBSTRAT*MULCH	2	63.50000000	1.70	0.1882
SEEDING*MULCH	4	153.33333333	2.05	0.0934
SUBSTRA*SEEDIN*MULCH	4	86.66666667	1.16	0.3333

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	6.16666667	0.10	0.9115

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	326.16666667	5.81	0.1469

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	153.33333333	1.77	0.2970

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	4191.71083333	246.57122549	0.87	0.6084	0.141359	84.6038
ERROR	90	25461.19833333	282.90220370		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	107	29652.90916667			16.81969690		19.88055556

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	61.20083333	0.22	0.6430
SEEDING	2	264.27388889	0.47	0.6283
MULCH	2	408.90500000	0.72	0.4882
SUBSTRAT*SEEDING	2	539.47722222	0.95	0.3893
SUBSTRAT*MULCH	2	475.00055556	0.84	0.4353
SEEDING*MULCH	4	1817.91111111	1.61	0.1795
SUBSTRA*SEEDIN*MULCH	4	624.94222222	0.55	0.6979

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	408.90500000	0.86	0.5374

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	264.27388889	0.49	0.6712

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	1817.91111111	2.91	0.1629

1979 REVEGETATION DATA
SPECIES=AME-ALN

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	1	3
MULCH	2	1 2

NUMBER OF OBSERVATIONS IN BY GROUP = 12

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	1	0	0	99999.99	0.0000	0.000000	99999.9999
ERROR	10	0	0		STD DEV		COVER MEAN
CORRECTED TOTAL	11	0			0		0

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0	.	.
SEEDING	0	0	.	.
MULCH	1	0	.	.
SUBSTRAT*SEEDING	0	0	.	.
SUBSTRAT*MULCH	-1	0	.	.
SEEDING*MULCH	0	0	.	.
SUBSTRA*SEEDIN*MULCH	0	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	1	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	0	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	1	0	0	99999.99	0.0000	0.000000	99999.9999
ERROR	10	0	0		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	11	0			0		0

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0	.	.
SEEDING	0	0	.	.
MULCH	1	0	.	.
SUBSTRAT*SEEDING	0	0	.	.
SUBSTRAT*MULCH	-1	0	.	.
SEEDING*MULCH	0	0	.	.
SUBSTRA*SEEDIN*MULCH	0	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	1	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	0	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0	.	.

1979 REVEGETATION DATA
SPECIES=ART-TRI

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	2	1 2
MULCH	2	1 2

NUMBER OF OBSERVATIONS IN BY GROUP = 18

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	2	12.33333333	6.16666667	0.50	0.6150	0.062765	300.3399
ERROR	15	184.16666667	12.27777778		STD DEV		COVER MEAN
CORRECTED TOTAL	17	196.50000000			3.50396601		1.16666667

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	4.00000000	0.33	0.5766
SEEDING	1	2.25000000	0.18	0.6747
MULCH	1	2.25000000	0.18	0.6747
SUBSTRAT*SEEDING	0	6.08333333	.	.
SUBSTRAT*MULCH	0	6.08333333	.	.
SEEDING*MULCH	-1	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	1	2.25000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	2.25000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	-1	0.00000000	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	2	1923.44444444	961.72222222	0.50	0.6190	0.061951	299.3007
ERROR	15	29124.16666667	1941.61111111		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	17	31047.61111111			44.06371649		14.72222222

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	427.11111111	0.22	0.6458
SEEDING	1	536.69444444	0.28	0.6067
MULCH	1	536.69444444	0.28	0.6067
SUBSTRAT*SEEDING	0	959.63888889	.	.
SUBSTRAT*MULCH	0	959.63888889	.	.
SEEDING*MULCH	-1	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	1	536.69444444	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	536.69444444	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	-1	0.00000000	.	.

1979 REVEGETATION DATA
SPECIES=AST-CIC

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 108

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	315.66666667	18.56862745	1.62	0.0755	0.234174	112.8931
ERROR	90	1032.33333333	11.47037037		STD DEV		COVER MEAN
CORRECTED TOTAL	107	1348.00000000			3.38679352		3.00000000

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	6.25925926	0.55	0.4620
SEEDING	2	154.38888889	6.73	0.0019
MULCH	2	57.05555556	2.49	0.0889
SUBSTRAT*SEEDING	2	41.79629630	1.82	0.1676
SUBSTRAT*MULCH	2	12.57407407	0.55	0.5800
SEEDING*MULCH	4	21.05555556	0.46	0.7657
SUBSTRA*SEEDIN*MULCH	4	22.53703704	0.49	0.7422

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	57.05555556	4.54	0.1806

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	154.38888889	3.69	0.2130

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	21.05555556	0.93	0.5255

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	630.28740741	37.07572985	1.66	0.0656	0.238643	148.9191
ERROR	90	2010.84000000	22.34266667		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	107	2641.12740741			4.72680301		3.17407407

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	5.78703704	0.26	0.6120
SEEDING	2	259.88018519	5.82	0.0042
MULCH	2	39.87185185	0.89	0.4133
SUBSTRAT*SEEDING	2	94.38574074	2.11	0.1269
SUBSTRAT*MULCH	2	46.44740741	1.04	0.3579
SEEDING*MULCH	4	122.02870370	1.37	0.2522
SUBSTRA*SEEDIN*MULCH	4	61.88648148	0.69	0.5991

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	39.87185185	0.86	0.5381

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	259.88018519	2.75	0.2664

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	122.02870370	1.97	0.2635

1979 REVEGETATION DATA
SPECIES=ATR-BON

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	1	1
SEEDING	2	1 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 18

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	2	57.33333333	28.66666667	0.39	0.6824	0.049682	285.0168
ERROR	15	1096.66666667	73.11111111		STD DEV		COVER MEAN
CORRECTED TOTAL	17	1154.00000000			8.55050356		3.00000000

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	0	0.00000000	.	.
SEEDING	1	49.00000000	0.67	0.4258
MULCH	2	57.33333333	0.39	0.6824
SUBSTRAT*SEEDING	0	0.00000000	.	.
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	-1	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	57.33333333	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	49.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	-1	0.00000000	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	2	8784.33333333	4392.16666667	0.57	0.5789	0.070299	310.6038
ERROR	15	116171.66666667	7744.77777778		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	17	124956.00000000			88.00441908		28.33333333

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	0	0.00000000	.	.
SEEDING	1	5550.25000000	0.72	0.4105
MULCH	2	8784.33333333	0.57	0.5789
SUBSTRAT*SEEDING	0	0.00000000	.	.
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	-1	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	8784.33333333	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	5550.25000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	-1	0.00000000	.	.

1979 REVEGETATION DATA
SPECIES=ATR-CAN

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 108

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	1375.04629630	80.88507625	1.84	0.0343	0.258182	112.3330
ERROR	90	3950.83333333	43.89814815		STD DEV		COVER MEAN
CORRECTED TOTAL	107	5325.87962963			6.62556776		5.89814815

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	149.34259259	3.40	0.0684
SEEDING	2	456.51851852	5.20	0.0073
MULCH	2	17.01851852	0.19	0.8241
SUBSTRAT*SEEDING	2	355.85185185	4.05	0.0206
SUBSTRAT*MULCH	2	30.90740741	0.35	0.7042
SEEDING*MULCH	4	130.59259259	0.74	0.5647
SUBSTRA*SEEDIN*MULCH	4	234.81481481	1.34	0.2623

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	17.01851852	0.55	0.6449

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	456.51851852	1.28	0.4380

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	130.59259259	0.56	0.7081

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	119609.62601852	7035.86035403	1.02	0.4436	0.161739	167.4788
ERROR	90	619913.10166667	6887.92335185		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	107	739522.72768519			82.99351391		49.55462963

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	21350.39120370	3.10	0.0817
SEEDING	2	11557.04685185	0.84	0.4355
MULCH	2	2794.49018519	0.20	0.8168
SUBSTRAT*SEEDING	2	18139.77574074	1.32	0.2731
SUBSTRAT*MULCH	2	2643.47685185	0.19	0.8257
SEEDING*MULCH	4	30828.56481481	1.12	0.3526
SUBSTRA*SEEDIN*MULCH	4	32295.88037037	1.17	0.3284

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	2794.49018519	1.06	0.4861

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	11557.04685185	0.64	0.6108

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	30828.56481481	0.95	0.5174

1979 REVEGETATION DATA
SPECIES=ATR-GAR

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	1	2
MULCH	2	1 2

NUMBER OF OBSERVATIONS IN BY GROUP = 12

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	1	0.75000000	0.75000000	1.00	0.3409	0.090909	346.4102
ERROR	10	7.50000000	0.75000000		STD DEV		COVER MEAN
CORRECTED TOTAL	11	8.25000000			0.86602540		0.25000000

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.75000000	1.00	0.3409
SEEDING	0	0.00000000	.	.
MULCH	1	0.75000000	1.00	0.3409
SUBSTRAT*SEEDING	0	0.00000000	.	.
SUBSTRAT*MULCH	-1	0.00000000	.	.
SEEDING*MULCH	0	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	1	0.75000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0.00000000	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	1	5.46750000	5.46750000	0.75	0.4079	0.069435	309.3641
ERROR	10	73.27500000	7.32750000		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	11	78.74250000			2.70693554		0.87500000

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	5.46750000	0.75	0.4079
SEEDING	0	0.00000000	.	.
MULCH	1	5.46750000	0.75	0.4079
SUBSTRAT*SEEDING	0	0.00000000	.	.
SUBSTRAT*MULCH	-1	0.00000000	.	.
SEEDING*MULCH	0	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	1	5.46750000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0.00000000	.	.

1979 REVEGETATION DATA
SPECIES=BRO-INE

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 108

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	70.41666667	4.14215686	2.42	0.0038	0.314010	92.2861
ERROR	90	153.83333333	1.70925926		STD DEV		COVER MEAN
CORRECTED TOTAL	107	224.25000000			1.30738642		1.41666667

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	7.78703704	4.56	0.0355
SEEDING	2	9.05555556	2.65	0.0762
MULCH	2	24.38888889	7.13	0.0013
SUBSTRAT*SEEDING	2	16.46296296	4.82	0.0103
SUBSTRAT*MULCH	2	0.79629630	0.23	0.7927
SEEDING*MULCH	4	4.22222222	0.62	0.6511
SUBSTRA*SEEDIN*MULCH	4	7.70370370	1.13	0.3490

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	24.38888889	30.63	0.0316

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	9.05555556	3.55	0.6451

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	4.22222222	0.55	0.7127

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	386.14601852	22.71447168	1.41	0.1524	0.209800	140.0045
ERROR	90	1454.39500000	16.15994444		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	107	1840.54101852			4.01994334		2.87129630

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	27.50231481	1.70	0.1954
SEEDING	2	105.96462963	3.28	0.0422
MULCH	2	33.68351852	1.04	0.3569
SUBSTRAT*SEEDING	2	78.38907407	2.43	0.0942
SUBSTRAT*MULCH	2	0.84018519	0.03	0.9743
SEEDING*MULCH	4	84.38870370	1.31	0.2740
SUBSTRA*SEEDIN*MULCH	4	55.37759259	0.86	0.4932

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	33.68351852	40.09	0.0243

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	105.96462963	1.35	0.4252

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	84.38870370	1.52	0.3466

1979 REVEGETATION DATA
SPECIES=BRO-TEC

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 108

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	78.33333333	4.60784314	3.28	0.0001	0.382736	266.5755
ERROR	90	126.33333333	1.40370370		STD DEV		COVER MEAN
CORRECTED TOTAL	107	204.66666667			1.18478002		0.44444444

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.03703704	0.03	0.8713
SEEDING	2	30.38888889	10.82	0.0001
MULCH	2	5.16666667	1.84	0.1647
SUBSTRAT*SEEDING	2	0.12962963	0.05	0.9549
SUBSTRAT*MULCH	2	10.90740741	3.89	0.0241
SEEDING*MULCH	4	9.77777778	1.74	0.1478
SUBSTRA*SEEDIN*MULCH	4	21.92592593	3.91	0.0057

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	5.16666667	0.47	0.6786

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	30.38888889	234.43	0.0042

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	9.77777778	0.45	0.7733

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	80.25296296	4.72076253	2.77	0.0010	0.343834	230.9595
ERROR	90	153.15333333	1.70170370		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	107	233.40629630			1.30449366		0.56481481

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.00333333	0.00	0.9648
SEEDING	2	25.98685185	7.64	0.0009
MULCH	2	9.66907407	2.84	0.0636
SUBSTRAT*SEEDING	2	0.56166667	0.17	0.8481
SUBSTRAT*MULCH	2	5.57055556	1.64	0.2003
SEEDING*MULCH	4	23.89703704	3.51	0.0104
SUBSTRA*SEEDIN*MULCH	4	14.56444444	2.14	0.0823

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	9.66907407	1.74	0.3655

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	25.98685185	46.27	0.0212

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	23.89703704	1.64	0.3216

1979 REVEGETATION DATA
SPECIES=CAM-MON

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	2	1 2
MULCH	2	1 3

NUMBER OF OBSERVATIONS IN BY GROUP = 12

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	1	0.75000000	0.75000000	0.53	0.4835	0.050279	285.6571
ERROR	10	14.16666667	1.41666667		STD DEV		COVER MEAN
CORRECTED TOTAL	11	14.91666667			1.19023807		0.41666667

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.75000000	0.53	0.4835
SEEDING	1	0.75000000	0.53	0.4835
MULCH	1	0.75000000	0.53	0.4835
SUBSTRAT*SEEDING	-1	0.00000000	.	.
SUBSTRAT*MULCH	-1	0.00000000	.	.
SEEDING*MULCH	-1	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	1	0.75000000	0.53	0.4835

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	1	0.75000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	0.75000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	-1	0.00000000	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	1	69.12000000	69.12000000	0.92	0.3601	0.084260	333.3531
ERROR	10	751.20000000	75.12000000		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	11	820.32000000			8.66717947		2.60000000

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	69.12000000	0.92	0.3601
SEEDING	1	69.12000000	0.92	0.3601
MULCH	1	69.12000000	0.92	0.3601
SUBSTRAT*SEEDING	-1	0.00000000	.	.
SUBSTRAT*MULCH	-1	0.00000000	.	.
SEEDING*MULCH	-1	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	1	69.12000000	0.92	0.3601

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	1	69.12000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	69.12000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	-1	0.00000000	.	.

1979 REVEGETATION DATA
SPECIES=CER-MON

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	1	1
SEEDING	1	1
MULCH	1	1

NUMBER OF OBSERVATIONS IN BY GROUP = 6

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	0	0	0	99999.99	0.0000	0.000000	99999.9999
ERROR	5	0	0		STD DEV		COVER MEAN
CORRECTED TOTAL	5	0			0		0

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	0	0	.	.
SEEDING	0	0	.	.
MULCH	0	0	.	.
SUBSTRAT*SEEDING	0	0	.	.
SUBSTRAT*MULCH	0	0	.	.
SEEDING*MULCH	0	0	.	.
SUBSTRA*SEEDIN*MULCH	0	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	0	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	0	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	0	0.00000000	0.00000000	0.00	1.0000	0.000000	244.9490
ERROR	5	0.00833333	0.00166667		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	5	0.00833333			0.04082483		0.01666667

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	0	0.00000000	.	.
SEEDING	0	0.00000000	.	.
MULCH	0	0.00000000	.	.
SUBSTRAT*SEEDING	0	0.00000000	.	.
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	0	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0.00000000	.	.

1979 REVEGETATION DATA
SPECIES=CHE-SPP

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	1	2
SEEDING	2	1 2
MULCH	1	3

NUMBER OF OBSERVATIONS IN BY GROUP = 12

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	1	0	0	99999.99	0.0000	0.000000	99999.9999
ERROR	10	0	0		STD DEV		COVER MEAN
CORRECTED TOTAL	11	0			0		0

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	0	0	.	.
SEEDING	1	0	.	.
MULCH	0	0	.	.
SUBSTRAT*SEEDING	0	0	.	.
SUBSTRAT*MULCH	0	0	.	.
SEEDING*MULCH	0	0	.	.
SUBSTRA*SEEDIN*MULCH	0	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	0	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	1	0.02083333	0.02083333	1.00	0.3409	0.090909	346.4102
ERROR	10	0.20833333	0.02083333		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	11	0.22916667			0.14433757		0.04166667

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	0	0.00000000	.	.
SEEDING	1	0.02083333	1.00	0.3409
MULCH	0	0.00000000	.	.
SUBSTRAT*SEEDING	0	0.00000000	.	.
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	0	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	0.02083333	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0.00000000	.	.

1979 REVEGETATION DATA
SPECIES=CHK-NAU

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 36

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	5	171.47222222	34.29444444	1.22	0.3246	0.168832	293.7938
ERROR	30	844.16666667	28.13888889		STD DEV		COVER MEAN
CORRECTED TOTAL	35	1015.63888889			5.30461015		1.80555556

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	11.68055556	0.42	0.5243
SEEDING	2	42.69444444	0.76	0.4771
MULCH	2	80.38888889	1.43	0.2555
SUBSTRAT*SEEDING	1	15.01388889	0.53	0.4708
SUBSTRAT*MULCH	1	79.06944444	2.81	0.1041
SEEDING*MULCH	0	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	-2	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	80.38888889	0.51	0.7042

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	42.69444444	1.42	0.5101

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0.00000000	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	5	7177.66666667	1435.53333333	1.50	0.2182	0.200415	319.6107
ERROR	30	28636.33333333	954.54444444		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	35	35814.00000000			30.89570269		9.66666667

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	612.50000000	0.64	0.4294
SEEDING	2	1970.13888889	1.03	0.3686
MULCH	2	3854.16666667	2.02	0.1505
SUBSTRAT*SEEDING	1	224.94444444	0.24	0.6309
SUBSTRAT*MULCH	1	2708.91666667	2.84	0.1024
SEEDING*MULCH	0	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	-2	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	3854.16666667	0.71	0.6425

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	1970.13888889	4.38	0.3201

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0.00000000	.	.

1979 REVEGETATION DATA
SPECIES=CRY-SER

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	1	1
SEEDING	2	1 3
MULCH	2	2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 12

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	1	0.08333333	0.08333333	1.00	0.3409	0.090909	346.4102
ERROR	10	0.83333333	0.08333333		STD DEV		COVER MEAN
CORRECTED TOTAL	11	0.91666667			0.28867513		0.08333333

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	0	0.00000000	.	.
SEEDING	1	0.08333333	1.00	0.3409
MULCH	1	0.08333333	1.00	0.3409
SUBSTRAT*SEEDING	0	0.00000000	.	.
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	-1	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	1	0.08333333	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	0.08333333	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	-1	0.00000000	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	1	0.02083333	0.02083333	1.00	0.3409	0.090909	346.4102
ERROR	10	0.20833333	0.02083333		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	11	0.22916667			0.14433757		0.04166667

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	0	0.00000000	.	.
SEEDING	1	0.02083333	1.00	0.3409
MULCH	1	0.02083333	1.00	0.3409
SUBSTRAT*SEEDING	0	0.00000000	.	.
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	-1	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	1	0.02083333	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	0.02083333	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	-1	0.00000000	.	.

1979 REVEGETATION DATA
SPECIES=EUR-LAN

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 102

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	16	1711.64705982	106.97794118	3.20	0.0003	0.376202	63.4445
ERROR	85	2838.16666667	33.39019608		STD DEV		COVER MEAN
CORRECTED TOTAL	101	4549.81372549			5.77842505		9.10784314

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	75.57529956	2.26	0.1362
SEEDING	2	632.97483660	9.48	0.0002
MULCH	2	250.42483660	3.75	0.0275
SUBSTRAT*SEEDING	2	95.87470044	1.44	0.2437
SUBSTRAT*MULCH	2	388.31358932	5.81	0.0043
SEEDING*MULCH	4	216.49738562	1.62	0.1764
SUBSTRA*SEEDIN*MULCH	3	51.98641068	0.52	0.6744

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	250.42483660	0.64	0.6079

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	632.97483660	6.60	0.1315

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	216.49738562	3.12	0.1883

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	16	121304.34705882	7581.52169118	2.26	0.0085	0.298813	92.9506
ERROR	85	284649.96166667	3348.82307843		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	101	405954.30872549			57.86901657		62.25784314

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	16494.61307734	4.93	0.0291
SEEDING	2	19290.20405882	2.88	0.0616
MULCH	2	30038.46905882	4.48	0.0141
SUBSTRAT*SEEDING	2	9606.32131155	1.43	0.2440
SUBSTRAT*MULCH	2	31029.04047821	4.63	0.0123
SEEDING*MULCH	4	14772.02810784	1.10	0.3606
SUBSTRA*SEEDIN*MULCH	3	73.67096623	0.01	0.9964

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	30038.46905882	0.97	0.5081

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	19290.20405882	2.01	0.3324

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	14772.02810784	150.39	0.0009

1979 REVEGETATION DATA
SPECIES=KOC-PRO

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 30

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	4	34.66666667	8.66666667	0.20	0.9387	0.030263	266.6333
ERROR	25	1110.83333333	44.43333333		STD DEV		COVER MEAN
CORRECTED TOTAL	29	1145.50000000			6.66583328		2.50000000

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	3.47222222	0.08	0.7821
SEEDING	2	10.25000000	0.12	0.8915
MULCH	2	15.22222222	0.17	0.8436
SUBSTRAT*SEEDING	1	20.94444444	0.47	0.4987
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	0	9.19444444	.	.
SUBSTRA*SEEDIN*MULCH	-2	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	15.22222222	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	10.25000000	0.24	0.8194

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	9.19444444	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	4	3434.00000000	858.50000000	0.25	0.9042	0.039108	274.4620
ERROR	25	84374.16666667	3374.96666667		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	29	87808.16666667			58.09446330		21.16666667

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	467.22222222	0.14	0.7130
SEEDING	2	1525.58333333	0.23	0.7993
MULCH	2	966.88888889	0.14	0.8672
SUBSTRAT*SEEDING	1	1441.19444444	0.43	0.5194
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	0	941.52777778	.	.
SUBSTRA*SEEDIN*MULCH	-2	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	966.88888889	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	1525.58333333	0.53	0.6970

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	941.52777778	.	.

1979 REVEGETATION DATA
SPECIES=LIN-LEW

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 72

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	11	3.70833333	0.33712121	0.80	0.6367	0.128427	222.0498
ERROR	60	25.16666667	0.41944444		STD DEV		COVER MEAN
CORRECTED TOTAL	71	28.87500000			0.64764531		0.29166667

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.17500000	0.42	0.5208
SEEDING	2	0.17500000	0.21	0.8123
MULCH	2	0.05000000	0.06	0.9422
SUBSTRAT*SEEDING	2	0.83055556	0.99	0.3775
SUBSTRAT*MULCH	2	0.20555556	0.25	0.7835
SEEDING*MULCH	3	1.40000000	1.11	0.3516
SUBSTRA*SEEDIN*MULCH	-1	0.87222222	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	0.05000000	0.24	0.8043

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	0.17500000	0.21	0.8260

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	3	1.40000000	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	11	4.01833333	0.36530303	0.74	0.6975	0.119398	187.4165
ERROR	60	29.63666667	0.49394444		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	71	33.65500000			0.70281181		0.37500000

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.76128571	1.54	0.2193
SEEDING	2	0.44300000	0.45	0.6408
MULCH	2	0.07597222	0.08	0.9261
SUBSTRAT*SEEDING	2	0.21126984	0.21	0.8081
SUBSTRAT*MULCH	2	0.15440873	0.16	0.8556
SEEDING*MULCH	3	1.77019444	1.19	0.3195
SUBSTRA*SEEDIN*MULCH	-1	0.60220238	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	0.07597222	0.49	0.6702

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	0.44300000	2.10	0.3229

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	3	1.77019444	.	.

1979 REVEGETATION DATA
SPECIES=MEL-OFF

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 90

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	14	0.73333333	0.05238095	1.81	0.0520	0.252874	509.9020
ERROR	75	2.16666667	0.02888889		STD DEV		COVER MEAN
CORRECTED TOTAL	89	2.90000000			0.16996732		0.03333333

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.01607143	0.56	0.4581
SEEDING	2	0.05277778	0.91	0.4055
MULCH	2	0.15000000	2.60	0.0812
SUBSTRAT*SEEDING	2	0.13670635	2.37	0.1008
SUBSTRAT*MULCH	2	0.01170635	0.20	0.8170
SEEDING*MULCH	3	0.11388889	1.31	0.2755
SUBSTRA*SEEDIN*MULCH	2	0.25218254	4.36	0.0161

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	0.15000000	12.81	0.0724

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	0.05277778	0.39	0.7215

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	3	0.11388889	0.30	0.8265

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	14	0.97933333	0.06995238	0.89	0.5766	0.141912	255.4457
ERROR	75	5.92166667	0.07895556		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	89	6.90100000			0.28099031		0.11000000

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.13207143	1.67	0.1999
SEEDING	2	0.10275000	0.65	0.5246
MULCH	2	0.28511111	1.81	0.1715
SUBSTRAT*SEEDING	2	0.09617857	0.61	0.5465
SUBSTRAT*MULCH	2	0.13437302	0.85	0.4311
SEEDING*MULCH	3	0.15147222	0.64	0.5958
SUBSTRA*SEEDIN*MULCH	2	0.07737698	0.49	0.6146

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	0.28511111	2.12	0.3203

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	0.10275000	1.07	0.4835

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	3	0.15147222	1.31	0.4615

1979 REVEGETATION DATA
SPECIES=ORY-HYM

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 108

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	209.51851852	12.32461874	3.16	0.0002	0.373572	77.8774
ERROR	90	351.33333333	3.90370370		STD DEV		COVER MEAN
CORRECTED TOTAL	107	560.85185185			1.97577926		2.53703704

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	48.00000000	12.30	0.0007
SEEDING	2	60.79629630	7.79	0.0008
MULCH	2	22.46296296	2.88	0.0615
SUBSTRAT*SEEDING	2	2.72222222	0.35	0.7066
SUBSTRAT*MULCH	2	0.38888889	0.05	0.9514
SEEDING*MULCH	4	25.92592593	1.66	0.1662
SUBSTRA*SEEDIN*MULCH	4	49.22222222	3.15	0.0179

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	22.46296296	57.76	0.0170

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	60.79629630	22.33	0.0429

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	25.92592593	0.53	0.7251

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	422.52666667	24.85450980	2.12	0.0124	0.285594	80.1098
ERROR	90	1056.94000000	11.74377778		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	107	1479.46666667			3.42691958		4.27777778

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	129.36333333	11.02	0.0013
SEEDING	2	1.92055556	0.08	0.9216
MULCH	2	40.46888889	1.72	0.1844
SUBSTRAT*SEEDING	2	64.22722222	2.73	0.0703
SUBSTRAT*MULCH	2	40.81555556	1.74	0.1818
SEEDING*MULCH	4	62.39555556	1.33	0.2656
SUBSTRA*SEEDIN*MULCH	4	83.33555556	1.77	0.1410

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	40.46888889	0.99	0.5021

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	1.92055556	0.03	0.9710

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	62.39555556	0.75	0.6070

1979 REVEGETATION DATA
SPECIES=PHY-FLO

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	2	2 3
MULCH	1	3

NUMBER OF OBSERVATIONS IN BY GROUP = 12

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	1	0	0	99999.99	0.0000	0.000000	99999.9999
ERROR	10	0	0		STD DEV		COVER MEAN
CORRECTED TOTAL	11	0			0		0

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0	.	.
SEEDING	1	0	.	.
MULCH	0	0	.	.
SUBSTRAT*SEEDING	-1	0	.	.
SUBSTRAT*MULCH	0	0	.	.
SEEDING*MULCH	0	0	.	.
SUBSTRA*SEEDIN*MULCH	0	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	0	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	1	0.05333333	0.05333333	2.50	0.1449	0.200000	219.0890
ERROR	10	0.21333333	0.02133333		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	11	0.26666667			0.14605935		0.06666667

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.05333333	2.50	0.1449
SEEDING	1	0.05333333	2.50	0.1449
MULCH	0	0.00000000	.	.
SUBSTRAT*SEEDING	-1	0.00000000	.	.
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	0	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	0.05333333	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0.00000000	.	.

1979 REVEGETATION DATA
SPECIES=PUR-TRI

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 102

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	16	5.41176471	0.33823529	0.84	0.6361	0.136735	174.7794
ERROR	85	34.16666667	0.40196078		STD DEV		COVER MEAN
CORRECTED TOTAL	101	39.57843137			0.63400377		0.36274510

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.22889434	0.57	0.4526
SEEDING	2	0.00065359	0.00	0.9992
MULCH	2	2.25065359	2.80	0.0665
SUBSTRAT*SEEDING	2	0.51555011	0.64	0.5291
SUBSTRAT*MULCH	2	0.18221678	0.23	0.7977
SEEDING*MULCH	4	1.66045752	1.03	0.3952
SUBSTRA*SEEDIN*MULCH	5	0.57333878	0.48	0.7041

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	2.25065359	12.35	0.0749

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	0.00065359	0.00	0.9987

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	1.66045752	2.17	0.2750

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	16	19.67333333	1.22958333	0.83	0.6532	0.134551	162.6845
ERROR	85	126.54166667	1.48872549		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	101	146.21500000			1.22013339		0.75000000

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	4.50539352	3.03	0.0855
SEEDING	2	0.75838889	0.25	0.7757
MULCH	2	1.15061111	0.39	0.6807
SUBSTRAT*SEEDING	2	1.73621759	0.58	0.5604
SUBSTRAT*MULCH	2	0.76093981	0.26	0.7751
SEEDING*MULCH	4	6.46016667	1.08	0.3692
SUBSTRA*SEEDIN*MULCH	3	4.30161574	0.96	0.4155

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	1.15061111	1.51	0.3981

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	0.75838889	0.44	0.6960

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	6.46016667	1.13	0.4803

1979 REVEGETATION DATA
SPECIES=SAL-KAL

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 108

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	52.41666667	3.08333333	1.51	0.1090	0.221869	190.5591
ERROR	90	183.83333333	2.04259259		STD DEV		COVER MEAN
CORRECTED TOTAL	107	236.25000000			1.42919299		0.75000000

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	2.08333333	1.02	0.3152
SEEDING	2	32.72222222	8.01	0.0006
MULCH	2	0.72222222	0.18	0.8382
SUBSTRAT*SEEDING	2	0.38888889	0.10	0.9093
SUBSTRAT*MULCH	2	7.38888889	1.81	0.1698
SEEDING*MULCH	4	3.55555556	0.44	0.7829
SUBSTRA*SEEDIN*MULCH	4	5.55555556	0.68	0.6076

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	0.72222222	0.10	0.9110

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	32.72222222	84.14	0.0117

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	3.55555556	0.64	0.6620

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	359.56157407	21.15068083	1.65	0.0688	0.237139	223.9318
ERROR	90	1156.68833333	12.85209259		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	107	1516.24990741			3.58498153		1.60092593

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	5.83342593	0.45	0.5022
SEEDING	2	257.89685185	10.03	0.0001
MULCH	2	1.53351852	0.06	0.9421
SUBSTRAT*SEEDING	2	11.65351852	0.45	0.6369
SUBSTRAT*MULCH	2	41.83796296	1.63	0.2021
SEEDING*MULCH	4	1.97870370	0.04	0.9971
SUBSTRA*SEEDIN*MULCH	4	38.82759259	0.76	0.5571

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	1.53351852	0.04	0.9646

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	257.89685185	22.13	0.0432

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	1.97870370	0.05	0.9932

SPECIES=SIT-HYS

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	1	1
SEEDING	1	2
MULCH	1	1

NUMBER OF OBSERVATIONS IN BY GROUP = 6

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	0	0.00000000	0.00000000	0.00	1.0000	0.000000	244.9490
ERROR	5	3.33333333	0.66666667		STD DEV		COVER MEAN
CORRECTED TOTAL	5	3.33333333			0.81649658		0.33333333

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	0	0.00000000	.	.
SEEDING	0	0.00000000	.	.
MULCH	0	0.00000000	.	.
SUBSTRAT*SEEDING	0	0.00000000	.	.
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	0	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0.00000000	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	0	0.00000000	0.00000000	0.00	1.0000	0.000000	244.9490
ERROR	5	16.13333333	3.22666667		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	5	16.13333333			1.79629248		0.73333333

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	0	0.00000000	.	.
SEEDING	0	0.00000000	.	.
MULCH	0	0.00000000	.	.
SUBSTRAT*SEEDING	0	0.00000000	.	.
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	0	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0.00000000	.	.

1979 REVEGETATION DATA
SPECIES=SPH-COC

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	2	2 3
MULCH	1	2

NUMBER OF OBSERVATIONS IN BY GROUP = 12

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	1	0.08333333	0.08333333	0.20	0.6643	0.019608	258.1989
ERROR	10	4.16666667	0.41666667		STD DEV		COVER MEAN
CORRECTED TOTAL	11	4.25000000			0.64549722		0.25000000

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.08333333	0.20	0.6643
SEEDING	1	0.08333333	0.20	0.6643
MULCH	0	0.00000000	.	.
SUBSTRAT*SEEDING	-1	0.00000000	.	.
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	0	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	0.08333333	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0.00000000	.	.

1979 REVEGETATION DATA
SPECIES=SPH-COC

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	1	7.52083333	7.52083333	0.90	0.3651	0.082590	330.3266
ERROR	10	83.54166667	8.35416667		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	11	91.06250000			2.89035753		0.87500000

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	7.52083333	0.90	0.3651
SEEDING	1	7.52083333	0.90	0.3651
MULCH	0	0.00000000	.	.
SUBSTRAT*SEEDING	-1	0.00000000	.	.
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	0	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	7.52083333	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0.00000000	.	.

SPECIES=STI-VIR

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	2	1 2
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 36

1979 REVEGETATION DATA
SPECIES=STI-VIR

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	5	37.13888889	7.42777778	1.73	0.1592	0.223317	126.6091
ERROR	30	129.16666667	4.30555556		STD DEV		COVER MEAN
CORRECTED TOTAL	35	166.30555556			2.07498327		1.63888889

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.93888889	0.22	0.6439
SEEDING	1	4.69444444	1.09	0.3047
MULCH	2	28.05555556	3.26	0.0524
SUBSTRAT*SEEDING	0	0.00000000	.	.
SUBSTRAT*MULCH	0	1.31111111	.	.
SEEDING*MULCH	1	0.00000000	0.00	1.0000
SUBSTRA*SEEDIN*MULCH	0	5.43888889	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	28.05555556	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	4.69444444	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	1	0.00000000	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	5	135.21805556	27.04361111	0.93	0.4753	0.134256	147.1437
ERROR	30	871.94500000	29.06483333		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	35	1007.16305556			5.39118107		3.66388889

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	25.61338889	0.88	0.3554
SEEDING	1	8.31361111	0.29	0.5967
MULCH	2	112.52805556	1.94	0.1619
SUBSTRAT*SEEDING	0	0.00000000	.	.
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	1	12.68888889	0.44	0.5138
SUBSTRA*SEEDIN*MULCH	0	9.03061111	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	112.52805556	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	1	8.31361111	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	1	12.68888889	.	.

1979 REVEGETATION DATA
SPECIES=TRI-SPI

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	1	1
SEEDING	1	1
MULCH	1	3

NUMBER OF OBSERVATIONS IN BY GROUP = 6

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V
MODEL	0	0.00000000	0.00000000	0.00	1.0000	0.000000	244.949
ERROR	5	3.33333333	0.66666667		STD DEV		COVER MEA
CORRECTED TOTAL	5	3.33333333			0.81649658		0.3333333

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	0	0.00000000	.	.
SEEDING	0	0.00000000	.	.
MULCH	0	0.00000000	.	.
SUBSTRAT*SEEDING	0	0.00000000	.	.
SUBSTRAT*MULCH	0	0.00000000	.	.
SEEDING*MULCH	0	0.00000000	.	.
SUBSTRA*SEEDIN*MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	0	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0.00000000	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	0	0	0	99999.99	0.0000	0.000000	99999.9999
ERROR	5	0	0		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	5	0			0		0

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	0	0	.	.
SEEDING	0	0	.	.
MULCH	0	0	.	.
SUBSTRAT*SEEDING	0	0	.	.
SUBSTRAT*MULCH	0	0	.	.
SEEDING*MULCH	0	0	.	.
SUBSTRA*SEEDIN*MULCH	0	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	0	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	0	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	0	0	.	.

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN BY GROUP = 78

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: COVER

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	12	1.33333333	0.11111111	0.53	0.8840	0.089888	273.4396
ERROR	65	13.50000000	0.20769231		STD DEV		COVER MEAN
CORRECTED TOTAL	77	14.83333333			0.45573272		0.16666667

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.48750000	2.35	0.1304
SEEDING	2	0.30000000	0.72	0.4895
MULCH	2	0.47222222	1.14	0.3271
SUBSTRAT*SEEDING	2	0.00000000	0.00	1.0000
SUBSTRAT*MULCH	2	0.06805556	0.16	0.8492
SEEDING*MULCH	4	0.14444444	0.17	0.9510
SUBSTRA*SEEDIN*MULCH	-1	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	0.47222222	6.94	0.1260

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	0.30000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	0.14444444	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: BIOMASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	12	6.78871795	0.56572650	0.58	0.8488	0.097025	289.0987
ERROR	65	63.18000000	0.97200000		STD DEV		BIOMASS MEAN
CORRECTED TOTAL	77	69.96871795			0.98590060		0.34102564

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.89692628	0.92	0.3403
SEEDING	2	1.56613462	0.81	0.4512
MULCH	2	0.21649573	0.11	0.8948
SUBSTRAT*SEEDING	2	0.00000000	0.00	1.0000
SUBSTRAT*MULCH	2	4.06779594	2.09	0.1316
SEEDING*MULCH	4	0.97108761	0.25	0.9088
SUBSTRA*SEEDIN*MULCH	-1	0.00000000	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	0.21649573	0.05	0.9495

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	1.56613462	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	0.97108761	.	.

APPENDIX 6-2.5

Biomass Data from RBOSC 1979 Revegetation Studies

at Site R3, Tract C-a

Included herein are biomass data for Site R3. Values are in g/m^2. The MEAN_DEN column represents mean biomass as based on six-1 x 1 m subplots sampled. Invaded species are indicated by an "I". Designations used in the life form column (LIF_FORM) are as follows:

F = forb
G = grass
S = shrub

For a listing of species names corresponding to abbreviations used on the print-out, see Appendix 6-2.1.

SUBSTRAT=NO PROCESS SHALE MULCH=NONE SEEDING=LOW

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
1	AST-CIC	F		2.2	4.2	0	5.9	0.3	0.4	2.1667
2	LIN-LEW	F		0.5	0.6	0	0	1.1	0	0.3667
3	MEL-OFF	F		0.4	0	1.2	0	0	0	0.2667
4	SAL-KAL	F	I	0.4	0	1.1	0	0	5.3	1.1333
5	UNK-FOR	F	I	0	2.4	0	0	0	0.1	0.4167
6	AGR-SPP	G		51.3	53.1	50.3	46.1	39.4	89.8	55.0000
7	AGR-TRI	G		16.2	43.7	1.0	7.6	41.6	7.0	19.5167
8	BRO-INE	G		0.6	3.0	8.8	1.3	1.3	5.7	3.4500
9	BRO-TEC	G	I	0	0	0	0.6	4.8	3.1	1.4167
10	ORY-HYM	G		2.7	2.6	7.8	0	2.4	1.5	2.8333
11	SIT-VIR	G		3.0	0	0	0	0.5	0	0.5833
12	ATR-CAN	S		62.1	6.6	0	38.5	19.9	0	21.1833
13	CER-MON	S		0	0	0.1	0	0	0	0.0167
14	EUR-LAN	S		54.0	7.1	76.7	118.0	19.2	0	45.8333
15	KOC-PRO	S		0	80.0	0	0	0	0	13.3333
16	PUR-TRI	S		0.3	1.4	0	0	0.3	0.4	0.4000

SUBSTRAT=NO PROCESS SHALE MULCH=NONE SEEDING=MEDIUM

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
17	AST-CIC	F		0.6	1.8	6.2	3.1	9.2	2.7	3.9333
18	LIN-LEW	F		0	0	0	0.3	0	0.1	0.0667
19	MEL-OFF	F		0	0	0	0	0	0	0.0000
20	SAL-KAL	F	I	0	0	0	0	1.6	0	0.2667
21	UNK-FOR	F	I	0	0	0.7	4.4	0.2	0	0.8833
22	AGR-SPP	G		71.0	59.3	16.0	38.7	14.9	42.6	40.4167
23	AGR-TRI	G		16.6	16.1	50.8	3.7	7.4	37.5	22.0167
24	BRO-INE	G		0	0.8	2.8	0.2	1.0	0.3	0.8500
25	BRO-TEC	G	I	0	0	0	0	0.8	0.4	0.2000
26	ORY-HYM	G		1.4	1.0	5.0	0.1	3.9	0.5	1.9833
27	SIT-HYS	G	I	0	0	0	0	4.4	0	0.7333
28	SYI-VIR	G		0	0	7.9	0	3.5	1.7	2.1833
29	ART-TRI	S		0	42.9	0	0	0	0	7.1500
30	ATR-CAN	S		14.9	0.9	0	0	3.3	64.9	14.0000
31	ATR-GAR	S		1.2	0	0	0	0	0	0.2000
32	EUR-LAN	S		90.5	26.9	24.3	131.1	36.3	19.0	54.6833
33	PUR-TRI	S		0.5	0.8	0.5	2.7	2.9	0.1	1.2500

SUBSTRAT=NO PROCESS SHALE MULCH=NONE SEEDING=HIGH

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
34	AST-CIC	F		0	0	1.4	1.3	0.4	0.3	0.567
35	LIN-LEW	F		0	0	0	0.8	2.0	2.7	0.917
36	MEL-OFF	F		0	0.3	0.2	0	0	0	0.083
37	SAL-KAL	F	I	0	0.3	0.2	0	0.6	0.1	0.200
38	UNK-FOR	F	I	0	0	0	1.1	0	0	0.183
39	AGR-SPP	G		63.8	77.8	68.4	45.8	53.5	77.3	64.433
40	AGR-TRI	G		7.4	10.9	29.4	47.1	4.9	6.1	17.633
41	BRO-INE	G		0	1.2	0.7	4.7	4.7	5.9	2.867
42	BRO-TEC	G	I	0.5	0.3	0.5	0	0.2	0.8	0.383
43	ORY-HYM	G		6.3	4.0	1.0	9.6	2.6	8.7	5.367
44	ATR-BON	S		21.5	0	0	0	0	0	3.583
45	ATR-CAN	S		60.1	15.7	22.4	22.9	3.6	60.0	30.783
46	EUR-LAN	S		27.9	178.8	73.3	71.7	102.7	148.5	100.483
47	PUR-TRI	S		0.5	0.1	0.9	1.2	0.3	0.4	0.567

SUBSTRAT=NO PROCESS SHALE MULCH=HYDRO SEEDING=LOW

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
48	AST-CIC	F		9.8	5.1	12.2	2.5	31.4	0	10.1667
49	MEL-OFF	F		0.2	0	0	0	0	0	0.0333
50	SAL-KAL	F	I	0.2	13.2	10.5	3.6	0	2.5	5.0000
51	AGR-CRI	G	I	10.0	0	10.5	18.5	22.3	0	10.2167
52	AGR-SPP	G		39.6	9.8	0	26.4	66.0	53.3	32.5167
53	AGR-TRI	G		21.2	11.3	80.0	0	0	0	18.7500
54	BRO-INE	G		0.7	5.0	1.3	1.3	3.5	0.1	1.9833
55	BRO-TEC	G	I	0	2.4	0	0	0	0	0.4000
56	ORY-HYM	G		2.8	0	3.4	0.9	0	0	1.1833
57	STI-VIR	G		0	4.3	16.6	1.4	10.3	6.1	6.4500
58	ART-TRI	S		0	0	0	0	176.0	0	29.3333
59	ATR-BON	S		0	0	146.2	0	0	0	24.3667
60	ATR-CAN	S		54.5	161.3	0	0.2	0	167.0	63.8333
61	PUR-TRI	S		1.0	0	0	0	1.5	3.9	1.0667

SUBSTRAT=NO PROCESS SHALE MULCH=HYDRO SEEDING=MEDIUM

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
62	AST-CIC	F		5.7	5.7	5.5	1.1	2.0	1.0	3.500
63	LIN-LEW	F		0	1.8	0	0.8	0	0	0.433
64	SAL-KAL	F	I	0	1.4	3.2	0	2.9	0.8	1.383
65	UNK-FOR	F	I	0.4	0	0.2	0.6	0.1	0	0.217
66	AGR-CRI	G	I	0	0	0	0	2.7	0	0.450
67	AGR-SPP	G		72.8	55.8	46.4	58.7	33.4	59.7	54.467
68	AGR-TRI	G		23.6	8.1	19.4	15.7	20.4	13.4	16.767
69	BRO-INE	G		0.6	0.4	2.3	0.1	2.7	0	1.017
70	BRO-TEC	G	I	0	0	1.8	0	0	0	0.300
71	ORY-HYM	G		0	1.2	2.2	0	0	0	0.567
72	STI-VIR	G		2.5	1.2	3.8	4.2	4.6	8.3	4.100
73	ATR-CAN	S		8.4	0	114.8	24.2	0	0	24.567
74	EUR-LAN	S		118.5	143.4	93.2	146.0	130.4	233.0	144.083
75	KOC-PRO	S		0	0	0	0	152.7	0	25.450
76	PUR-TRI	S		0	0.5	0.5	0	0	0.4	0.233

SUBSTRAT=NO PROCESS SHALE MULCH=HYDRO SEEDING=HIGH

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
77	AST-CIC	F		0.1	0	0.2	0.1	0	0.4	0.133
78	CRY-SER	F	I	0	0	0	0	0	0	0.000
79	MEL-OFF	F		0	0.2	0	0	0	0	0.033
80	SAL-KAL	F	I	1.7	0.1	0	0	0	0	0.300
81	SPH-COC	F	I	0.5	0	0	0	0	0	0.083
82	UNK-FOR	F	I	0	0	0	0.2	0	0.6	0.133
83	AGR-SPP	G		54.4	48.5	83.2	80.4	74.8	80.6	70.317
84	AGR-TRI	G		16.4	14.4	7.1	8.9	39.2	30.1	19.350
85	BRO-INE	G		0.1	1.4	1.6	2.9	1.5	5.4	2.150
86	BRO-TEC	G	I	0	0	0	0	0	0.2	0.033
87	ORY-HYM	G		1.2	1.5	5.8	6.5	1.1	2.1	3.033
88	AME-ALN	S		0	0	0	0	0	0	0.000
89	ATR-CAN	S		72.1	4.4	170.7	14.4	14.6	7.5	47.283
90	CHR-NAU	S		0	0	0	0	0	0	0.000
91	EUR-LAN	S		45.6	37.1	148.5	90.3	75.9	309.1	117.750
92	PUR-TRI	S		1.5	1.6	6.2	0.4	0.1	0	1.633

1979 REVEGETATION BIOMASS DATA

SUBSTRAT=NO PROCESS SHALE MULCH=STRAW SEEDING=LOW

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
93	AST-CIC	F		4.3	0.9	0.6	12.1	2.5	7.1	4.5833
94	CRY-SER	F	I	0	0	0.5	0	0	0	0.0833
95	LIN-LEW	F		3.3	0	0	0.5	0	0	0.6333
96	MEL-OFF	F		0.3	0	0	2.0	0	0	0.3833
97	SAL-KAL	F	I	0.3	0.8	0	3.8	2.2	12.3	3.2333
98	UNK-FOR	F	I	0	0	0	0	0.6	0	0.1000
99	AGR-CRI	G	I	0.8	3.4	1.3	0	0	0	0.9167
100	AGR-SPP	G		45.1	52.6	0	38.7	39.2	49.0	37.4333
101	AGR-TRI	G		0	28.3	29.2	21.9	0	14.0	15.5667
102	BRO-INE	G		5.0	3.8	3.0	2.0	0	6.7	3.4167
103	BRO-TEC	G	I	0	2.9	3.9	1.6	1.5	0	1.6500
104	ORY-HYM	G		5.1	0	12.1	0.6	3.5	8.0	4.8833
105	TRI-SPI	G	I	0	0	0	0	0	0	0.0000
106	ATR-BON	S		0	0	0	0	343.7	0	57.2833
107	ATR-CAN	S		1.9	0	56.8	26.4	151.0	0	39.3500
108	CAM-MON	S		1.2	0	0	0	0	0	0.2000
109	CHR-NAU	S		0	0	46.6	0	0	0	7.7667
110	EUR-LAN	S		31.7	20.2	0	0	8.2	106.2	27.7167
111	PUR-TRI	S		0.7	0	1.2	1.2	0	0.7	0.6333

1979 REVEGETATION BIOMASS DATA

SUBSTRAT=NO PROCESS SHALE MULCH=STRAW SEEDING=MEDIUM

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
112	AST-CIC	F		2.6	0.5	11.4	0.8	2.9	6.3	4.0833
113	LIN-LEW	F		0.4	0.6	1.6	0	0.9	0	0.5833
114	MEL-OFF	F		0	0	0	0.5	0.5	0	0.1667
115	PHY-FLO	F	I	0	0	0	0	0	0	0.0000
116	SAL-KAL	F	I	0	0	0	0	4.1	0	0.6833
117	UNK-FOR	F	I	0	0	0	0	0	0.5	0.0833
118	AGR-CRI	G	I	2.0	6.4	1.1	0	0	0	1.5833
119	AGR-SPP	G		65.6	63.2	82.7	79.0	28.8	113.6	72.1500
120	AGR-TRI	G		16.9	2.3	38.9	15.5	28.6	20.8	20.5000
121	BRO-INE	G		0.8	2.2	1.9	4.0	3.8	1.5	2.3667
122	BRO-TEC	G	I	0.7	1.4	0	0.4	0.4	0.4	0.5500
123	ORY-HYM	G		2.8	0	1.0	7.0	9.9	4.1	4.1333
124	STI-VIR	G		4.9	1.7	0	0	13.9	0	3.4167
125	ATR-CAN	S		0.9	66.5	0	40.0	0	138.1	40.9167
126	EUR-LAN	S		8.5	119.1	54.7	67.3	117.3	10.0	62.8167
127	PUR-TRI	S		0.4	0	1.0	0	8.6	0.5	1.7500

SUBSTRAT=NO PROCESS SHALE MULCH=STRAW SEEDING=HIGH

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
128	AST-CIC	F		4.3	0.5	0.6	2.2	1.8	0.8	1.7000
129	LIN-LEW	F		0	0	1.4	0	0	0	0.2333
130	MEL-OFF	F		0.2	0.2	0	0	0.4	0.4	0.2000
131	SAL-KAL	F	I	0	0.2	0	1.1	0.4	0	0.2833
132	UNK-FOR	F	I	0.2	0	0	0	0	0	0.0333
133	AGR-SPP	G		38.2	66.3	75.3	79.4	63.5	54.2	62.8167
134	AGR-TRI	G		8.4	11.4	16.3	63.9	23.4	25.7	24.8500
135	BRO-INE	G		3.6	2.9	5.7	2.0	2.0	3.0	3.2000
136	BRO-TEC	G	I	0	0	0	0	0.6	0	0.1000
137	ORY-HYM	G		4.9	2.2	6.5	2.7	2.7	9.1	4.6833
138	ATR-CAN	S		19.7	24.1	29.6	21.2	21.4	122.8	39.8000
139	EUR-LAN	S		27.5	27.6	25.6	46.1	124.5	80.9	55.3667
140	KOC-PRO	S		0	0	91.5	0	0	0	15.2500
141	PUR-TRI	S		1.0	1.3	2.0	0	0.8	0.9	1.0000

SUBSTRAT=PROCESS SHALE MULCH=NONE SEEDING=LOW

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
142	AST-CIC	F		0.4	3.8	0.4	1.2	0	4.8	1.7667
143	MEL-OFF	F		0	0	0	0	0	0	0.0000
144	SAL-KAL	F	I	0	8.7	0	22.7	1.5	4.3	6.2000
145	UNK-FOR	F	I	0	0	0.4	0	0	1.8	0.3667
146	AGR-CRI	G	I	64.1	16.5	1.9	0	0	0	13.7500
147	AGR-SPP	G		40.7	15.6	39.8	55.6	77.7	37.9	44.5500
148	AGR-TRI	G		12.0	3.5	20.3	21.4	17.3	5.0	13.2500
149	BRO-INE	G		1.1	0	1.6	0	1.3	35.8	6.6333
150	BRO-TEC	G	I	0	4.2	6.6	0	0	11.4	3.7000
151	ORY-HYM	G		0	0	4.7	10.7	1.0	1.8	3.0333
152	ATR-CAN	S		0	8.4	90.7	0	0	235.1	55.7000
153	EUR-LAN	S		159.8	16.3	46.3	0.1	142.3	0	60.8000

SUBSTRAT=PROCESS SHALE MULCH=NONE SEEDING=MEDIUM

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
154	AST-CIC	F		0.6	0	25.2	0.5	5.1	0	5.2333
155	MEL-OFF	F		0	0	0	0	0.2	0	0.0333
156	SAL-KAL	F	I	0.5	0	5.4	2.0	2.5	0.9	1.8833
157	UNK-FOR	F	I	0	0	0.5	1.0	0	0	0.2500
158	AGR-SPP	G		38.9	52.5	40.9	46.4	15.5	53.8	41.3333
159	AGR-TRI	G		34.1	20.1	0	27.6	30.0	43.4	25.8667
160	BRO-INE	G		0	2.5	2.2	0	1.6	2.5	1.4667
161	BRO-TEC	G	I	0	0	0	0	0	0.2	0.0333
162	ORY-HYM	G		5.0	7.3	6.3	2.3	14.3	18.1	8.8833
163	ATR-CAN	S		0	18.3	0	0	219.4	265.1	83.8000
164	CAM-MON	S		0	0	30.4	0	0	0	5.0667
165	CHR-NAU	S		18.7	0	0	0	0	0	3.1167
166	EUR-LAN	S		83.6	33.7	0	33.4	78.8	13.1	40.4333
167	PUR-TRI	S		0	1.0	0	0	0	0.3	0.2167

SUBSTRAT=PROCESS SHALE MULCH=NONE SEEDING=HIGH

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
168	AST-CIC	F		0.9	1.5	0	0	0	0	0.4000
169	LIN-LEW	F		0.5	1.5	0	0	0	0	0.3333
170	SAL-KAL	F	I	0	0	0	0	0	0	0.0000
171	UNK-FOR	F	I	0	0	1.6	0	0	0	0.2667
172	AGR-SPP	G		31.6	41.2	83.4	68.4	40.6	47.6	52.1333
173	AGR-TRI	G		5.6	0	10.0	6.5	6.5	9.7	6.3833
174	BRO-INE	G		0.6	2.1	1.9	0.9	2.8	0.9	1.5333
175	BRO-TEC	G	I	0	0	0	0.5	0	0	0.0833
176	ORY-HYM	G		7.6	4.2	3.8	5.3	4.1	4.5	4.9167
177	AME-ALN	S		0	0	0	0	0	0	0.0000
178	ATR-CAN	S		39.0	155.6	58.6	10.5	22.9	27.9	52.4167
179	CHR-NAU	S		23.4	0	0	0	0	0	3.9000
180	EUR-LAN	S		63.2	32.2	329.3	62.8	43.8	64.9	99.3667
181	PUR-TRI	S		1.0	1.5	0	0	0	0.5	0.5000

SUBSTRAT=PROCESS SHALE MULCH=HYDRO SEEDING=LOW

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
182	AST-CIC	F		3.0	3.7	1.3	4.8	3.1	0	2.6500
183	LIN-LEW	F		0	1.9	0	0	0	0.8	0.4500
184	MEL-OFF	F		0	0	0	0	0.3	0	0.0500
185	SAL-KAL	F	I	0.5	11.8	3.8	2.1	0	0	3.0333
186	UNK-FOR	F	I	0.5	0	0	0.4	0	1.8	0.4500
187	AGR-SPP	G		60.0	69.5	66.3	6.6	83.1	65.0	58.4167
188	AGR-TRI	G		18.3	52.4	28.0	49.3	47.4	10.1	34.2500
189	BRO-INE	G		2.6	3.0	3.0	0.7	4.0	0	2.2167
190	BRO-TEC	G	I	0	0	0.2	0	0	0	0.0333
191	ORY-HYM	G		6.8	14.0	8.1	9.3	4.3	1.3	7.3000
192	STI-VIR	G		5.7	25.5	0	0	2.6	0	5.6333
193	ART-TRI	S		0	0	47.9	0	0	0	7.9833
194	ATR-CAN	S		0	0	0	0	0	13.0	2.1667
195	CHR-NAU	S		0	0	0	0	0	16.6	2.7667
196	EUR-LAN	S		79.3	0	178.1	24.8	0	190.0	78.7000
197	KOC-PRO	S		0	0	0	0	70.6	0	11.7667
198	PUR-TRI	S		0.5	0	1.3	1.7	0	0	0.5833

SUBSTRAT=PROCESS SHALE MULCH=HYDRO SEEDING=MEDIUM

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
199	AST-CIC	F		1.9	5.2	0.7	0.9	5.0	4.3	3.0000
200	LIN-LEW	F		0.5	0	0	0.6	0	0	0.1833
201	SAL-KAL	F	I	0.5	0	1.1	0	0.9	3.0	0.9167
202	SPH-COC	F	I	0	0	0	10.7	0	0	1.7833
203	AGR-SPP	G		49.0	79.8	80.2	64.2	49.9	47.7	61.8000
204	AGR-TRI	G		21.9	15.3	10.3	10.0	44.9	40.4	23.8000
205	BRO-INE	G		3.7	10.7	9.9	5.0	1.3	1.2	5.3000
206	BRO-TEC	G	I	0.5	0	0.9	0	0.5	0	0.3167
207	ORY-HYM	G		1.3	11.5	0.7	4.0	9.2	3.8	5.0833
208	ATR-CAN	S		69.4	32.7	62.1	0	0	71.4	39.2667
209	ATR-GAR	S		0	0	0	9.3	0	0	1.5500
210	EUR-LAN	S		54.3	0	89.8	24.4	56.6	11.7	39.4667
211	PUR-TRI	S		1.3	0	0.7	0	0	0.5	0.4167

SUBSTRAT=PROCESS SHALE MULCH=HYDRO SEEDING=HIGH

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
212	AST-CIC	F		0.2	0.6	1.7	0.9	1.3	2.2	1.150
213	MEL-OFF	F		0	0	0.2	0	0	0.3	0.083
214	SAL-KAL	F	I	0	0	0.4	0	0	0.3	0.117
215	AGR-SPP	G		25.2	67.8	44.8	37.1	46.5	52.5	45.650
216	AGR-TRI	G		10.0	8.5	18.3	23.7	4.4	5.2	11.683
217	BRO-INE	G		0.3	0.7	0.4	3.1	0.8	0	0.883
218	BRO-TEC	G	I	0.3	0.6	0	1.0	0	0	0.317
219	ORY-HYM	G		3.8	3.3	2.7	3.1	3.1	5.7	3.617
220	ATR-CAN	S		111.3	43.2	586.7	107.4	28.8	42.0	153.233
221	EUR-LAN	S		8.2	21.6	86.1	53.6	6.7	40.6	36.133
222	KOC-PRO	S		0	242.8	0	0	0	0	40.467
223	PUR-TRI	S		0.6	0	0.4	1.7	0.8	1.8	0.883

SUBSTRAT=PROCESS SHALE MULCH=STRAW SEEDING=LOW

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
224	AST-CIC	F		3.0	3.8	0	5.3	0.9	6.3	3.2167
225	CHE-SPP	F	I	0	0	0	0	0	0	0.0000
226	MEL-OFF	F		0.7	0	0.3	0	0	0	0.1667
227	SAL-KAL	F	I	1.5	22.5	2.1	0	0	0	4.3500
228	AGR-CRI	G	I	7.4	6.9	0	5.6	7.4	32.3	9.9333
229	AGR-SPP	G		93.8	20.9	76.0	78.4	40.1	39.7	58.1500
230	AGR-TRI	G		0	0	17.6	21.5	9.2	70.0	19.7167
231	BRO-INE	G		5.2	0	15.8	7.8	5.2	15.3	8.2167
232	BRO-TEC	G	I	0	0	0	0	2.4	0	0.4000
233	ORY-HYM	G		10.5	0.5	9.1	5.7	5.0	4.8	5.9333
234	ATR-CAN	S		0	19.7	0	0	8.7	215.1	40.5833
235	CHR-NAU	S		0	0	177.3	0	68.0	0	40.8833
236	EUR-LAN	S		0	0	0	0	1.5	0	0.2500
237	PUR-TRI	S		0	0	2.6	0.9	0	0	0.5833

SUBSTRAT=PROCESS SHALE MULCH=STRAW SEEDING=MEDIUM

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
238	AST-CIC	F		1.5	4.4	4.2	0.5	5.0	27.3	7.1500
239	CHE-SPP	F	I	0	0	0	0	0	0.5	0.0833
240	LIN-LEW	F		0	0	0	1.1	0	0	0.1833
241	MEL-OFF	F		0	0	0.5	0	0	0	0.0833
242	SAL-KAL	F	I	0.4	0	1.6	0	0	0	0.3333
243	UNK-FOR	F	I	0	0	6.3	0	0	0	1.0500
244	AGR-CRI	G	I	3.2	36.0	28.9	0	0	0	11.3500
245	AGR-SPP	G		42.6	32.3	23.7	61.7	57.8	52.8	45.1500
246	AGR-TRI	G		31.2	0	44.5	7.3	14.4	45.9	23.8833
247	BRO-INE	G		2.2	3.8	5.1	0	2.5	3.2	2.8000
248	BRO-TEC	G	I	0.4	0	0.4	0	0.7	0	0.2500
249	ORY-HYM	G		9.8	0	2.2	4.6	12.0	0	4.7667
250	ATR-CAN	S		0.7	131.0	0	13.2	341.1	81.6	94.6000
251	EUR-LAN	S		31.4	0	0	102.1	86.1	60.9	46.7500
252	PUR-TRI	S		0	0.9	0.7	0	0	1.1	0.4500

SUBSTRAT=PROCESS SHALE MULCH=STRAW SEEDING=HIGH

OBS	SPECIES	LIF_FORM	INVADED	SUBPL_1B	SUBPL_2B	SUBPL_3B	SUBPL_4B	SUBPL_5B	SUBPL_6B	MEAN_DEN
253	AST-CIC	F		2.7	0	1.2	1.0	5.4	1.7	2.0000
254	LIN-LEW	F		0	0	0.7	0	0	0	0.1167
255	MEL-OFF	F		0.1	0	0	0	0.3	0	0.0667
256	PHY-FLO	F	I	0.4	0	0.4	0	0	0	0.1333
257	SAL-KAL	F	I	0	0	0	0	0	0	0.0000
258	AGR-SPP	G		23.2	61.0	47.2	41.1	66.9	75.4	52.4667
259	AGR-TRI	G		30.7	44.9	48.2	6.6	36.2	7.2	28.9667
260	BRO-INE	G		1.3	1.1	2.1	1.2	1.6	3.3	1.7667
261	BRO-TEC	G	I	0.4	0	0	0	0	0	0.0667
262	ORY-HYM	G		3.0	10.0	8.0	3.7	2.5	3.8	5.1667
263	ATR-CAN	S		0	105.9	8.4	33.3	99.5	70.4	52.9167
264	EUR-LAN	S		54.8	9.0	82.7	73.3	69.7	31.7	53.5333
265	PUR-TRI	S		0.5	0.7	0.9	0	0.6	0.8	0.5833

APPENDIX 6-2.6

Analysis of Variance for Biomass Data from RBOSC
1979 Revegetation Studies at Site R3, Tract C-a

1979 REVEGITATION DENSITY DATA

ANALYSIS OF VARIANCE PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
SUBSTRAT	2	1 2
SEEDING	3	1 2 3
MULCH	3	1 2 3

NUMBER OF OBSERVATIONS IN DATA SET = 108

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: GRASS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	20960.69185186	1232.98187364	2.00	0.019?	0.274235	29.6307
ERROR	90	55472.65000000	616.36277778		STD DEV		GRASS MEAN
CORRECTED TOTAL	107	76433.34185186			24.82665458		83.78703704

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	162.31259260	0.26	0.6091
SEEDING	2	149.03240741	0.12	0.8863
MULCH	2	2704.63462963	2.19	0.1174
SUBSTRAT*SEEDING	2	9964.82796296	8.08	0.0006
SUBSTRAT*MULCH	2	770.18018518	0.62	0.5377
SEEDING*MULCH	4	2402.96648148	0.97	0.4255
SUBSTRA*SEEDIN*MULCH	4	4806.73759260	1.95	0.1090

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	2704.63462963	3.51	0.2216

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	149.03240741	0.01	0.9853

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	2402.96648148	0.50	0.7408

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: FORBS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	1341.92712963	78.93688998	2.07	0.0147	0.281243	112.7099
ERROR	90	3429.48500000	38.10538889		STD DEV		FORBS MEAN
CORRECTED TOTAL	107	4771.41212963			6.17295625		5.47685185

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.11342593	0.00	0.9566
SEEDING	2	878.89407407	11.53	0.0001
MULCH	2	35.38129630	0.46	0.6301
SUBSTRAT*SEEDING	2	68.12962963	0.89	0.4126
SUBSTRAT*MULCH	2	87.22907407	1.14	0.3229
SEEDING*MULCH	4	110.15925926	0.72	0.5786
SUBSTRA*SEEDIN*MULCH	4	162.02037037	1.06	0.3796

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	35.38129630	0.41	0.7114

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	878.89407407	12.90	0.0719

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	110.15925926	0.68	0.6412

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: SHRUBS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	171127.39046297	10066.31708606	0.85	0.6276	0.138999	86.3190
ERROR	90	1060012.36166666	11777.91512963		STD DEV		SHRUBS MEAN
CORRECTED TOTAL	107	1231139.75212963			108.52610345		125.72685185

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	274.24453704	0.02	0.8791
SEEDING	2	37133.66462963	1.58	0.2124
MULCH	2	28321.80240741	1.20	0.3053
SUBSTRAT*SEEDING	2	7654.23351852	0.32	0.7265
SUBSTRAT*MULCH	2	16767.63462963	0.71	0.4935
SEEDING*MULCH	4	27984.61259259	0.59	0.6679
SUBSTRA*SEEDIN*MULCH	4	53091.19814815	1.13	0.3489

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	28321.80240741	1.69	0.3719

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	37133.66462963	4.92	0.1690

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	27984.61259259	0.53	0.7248

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: TREES

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	0	0	99999.99	0.0000	0.000000	99999.9999
ERROR	90	0	0		STD DEV		TREES MEAN
CORRECTED TOTAL	107	0			0		0

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0	.	.
SEEDING	2	0	.	.
MULCH	2	0	.	.
SUBSTRAT*SEEDING	2	0	.	.
SUBSTRAT*MULCH	2	0	.	.
SEEDING*MULCH	4	0	.	.
SUBSTRA*SEEDIN*MULCH	4	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	0	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: GRASS_I

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	2808.04601852	165.17917756	2.78	0.0010	0.344356	236.6152
ERROR	90	5346.44166667	59.40490741		STD DEV		GRASS_I MEAN
CORRECTED TOTAL	107	8154.48768519			7.70745791		3.25462963

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	149.10750000	2.51	0.1166
SEEDING	2	863.44518519	7.27	0.0012
MULCH	2	109.33129630	0.92	0.4021
SUBSTRAT*SEEDING	2	89.30888889	0.75	0.4745
SUBSTRAT*MULCH	2	465.60388889	3.92	0.0233
SEEDING*MULCH	4	315.06370370	1.33	0.2664
SUBSTRA*SEEDIN*MULCH	4	816.18555556	3.43	0.0116

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	109.33129630	0.23	0.8098

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	863.44518519	9.67	0.0937

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	315.06370370	0.39	0.8105

1979 REVEGITATION DENSITY DATA

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: FORBS_I

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	347.09333333	20.41725490	1.45	0.1316	0.215196	191.2331
ERROR	90	1265.82333333	14.06470370		STD DEV		FORBS_I MEAN
CORRECTED TOTAL	107	1612.91666667			3.75029382		1.96111111

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	12.95148148	0.92	0.3398
SEEDING	2	251.34888889	8.94	0.0003
MULCH	2	3.77722222	0.13	0.8745
SUBSTRAT*SEEDING	2	12.85407407	0.46	0.6347
SUBSTRAT*MULCH	2	23.21240741	0.83	0.4414
SEEDING*MULCH	4	2.56055556	0.05	0.9960
SUBSTRA*SEEDIN*MULCH	4	40.38870370	0.72	0.5819

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	3.77722222	0.16	0.8600

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	251.34888889	19.55	0.0487

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	2.56055556	0.06	0.9898

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: SHRUBS_I

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	0	0	99999.99	0.0000	0.000000	99999.9999
ERROR	90	0	0		STD DEV		SHRUBS_I MEAN
CORRECTED TOTAL	107	0			0		0

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0	.	.
SEEDING	2	0	.	.
MULCH	2	0	.	.
SUBSTRAT*SEEDING	2	0	.	.
SUBSTRAT*MULCH	2	0	.	.
SEEDING*MULCH	4	0	.	.
SUBSTRA*SEEDIN*MULCH	4	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	0	.	.

1979 REVEGITATION DENSITY DATA

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: GRASS_P

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	23204.47490741	1364.96911220	2.22	0.0084	0.295456	30.7894
ERROR	90	55333.30166667	614.81446296		STD DEV		GRASS_P MEAN
CORRECTED TOTAL	107	78537.77657408			24.79545247		80.53240741

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0.28009260	0.00	0.9830
SEEDING	2	405.19796297	0.33	0.7201
MULCH	2	2408.11629630	1.96	0.1470
SUBSTRAT*SEEDING	2	8172.59796296	6.65	0.0020
SUBSTRAT*MULCH	2	1958.26962963	1.59	0.2091
SEEDING*MULCH	4	1766.50481481	0.72	0.5816
SUBSTRA*SEEDIN*MULCH	4	8493.50814815	3.45	0.0113

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	2408.11629630	1.23	0.4485

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	405.19796297	0.05	0.9528

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	1766.50481481	0.21	0.9213

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: FORBS_P

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	617.20157407	36.30597495	1.58	0.0855	0.230112	136.2448
ERROR	90	2064.98166667	22.94424074		STD DEV		FORBS_P MEAN
CORRECTED TOTAL	107	2682.18324074			4.79001469		3.51574074

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	15.48898148	0.68	0.4135
SEEDING	2	257.98740741	5.62	0.0050
MULCH	2	44.07796296	0.96	0.3866
SUBSTRAT*SEEDING	2	97.79851852	2.13	0.1246
SUBSTRAT*MULCH	2	29.11574074	0.63	0.5326
SEEDING*MULCH	4	120.47037037	1.31	0.2713
SUBSTRA*SEEDIN*MULCH	4	52.26259259	0.57	0.6855

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	44.07796296	1.51	0.3978

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	257.98740741	2.64	0.2749

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	120.47037037	2.31	0.2192

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: SHRUBS_P

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	171127.39046297	10066.31708606	0.85	0.6276	0.138999	86.3190
ERROR	90	1060012.36166666	11777.91512963		STD DEV		SHRUBS_P MEAN
CORRECTED TOTAL	107	1231139.75212963			108.52610345		125.72685185

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	274.24453704	0.02	0.8791
SEEDING	2	37133.66462963	1.58	0.2124
MULCH	2	28321.80240741	1.20	0.3053
SUBSTRAT*SEEDING	2	7564.23351852	0.32	0.7265
SUBSTRAT*MULCH	2	16767.63462963	0.71	0.4935
SEEDING*MULCH	4	27984.61259259	0.59	0.6679
SUBSTRA*SEEDIN*MULCH	4	53091.19814815	1.13	0.3489

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	28321.80240741	1.69	0.3719

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	37133.66462963	4.92	0.1690

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	27984.61259259	0.53	0.7248

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: TREES_P

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	0	0	99999.99	0.0000	0.000000	99999.9999
ERROR	90	0	0		STD DEV		TREES_P MEAN
CORRECTED TOTAL	107	0			0		0

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	0	.	.
SEEDING	2	0	.	.
MULCH	2	0	.	.
SUBSTRAT*SEEDING	2	0	.	.
SUBSTRAT*MULCH	2	0	.	.
SEEDING*MULCH	4	0	.	.
SUBSTRA*SEEDIN*MULCH	4	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	0	.	.

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	0	.	.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: INVAD

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	4643.80157407	273.16479847	4.44	0.0001	0.456064	150.4044
ERROR	90	5538.54166667	61.53935185		STD DEV		INVAD MEAN
CORRECTED TOTAL	107	10182.34324074			7.84470215		5.21574074

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	249.94898148	4.06	0.0469
SEEDING	2	2046.50962963	16.63	0.0001
MULCH	2	73.09462963	0.59	0.5543
SUBSTRAT*SEEDING	2	169.70296296	1.38	0.2571
SUBSTRAT*MULCH	2	638.23018519	5.19	0.0074
SEEDING*MULCH	4	280.23148148	1.14	0.3436
SUBSTRA*SEEDIN*MULCH	4	1186.08370370	4.82	0.0014

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	73.09462963	0.11	0.8972

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	2046.50962963	12.06	0.0766

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	280.23148148	0.24	0.9044

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: PLANTED

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	141400.08416668	8317.65200980	0.64	0.8489	0.108279	54.2240
ERROR	90	1164484.41833332	12938.71575926		STD DEV		PLANTED MEAN
CORRECTED TOTAL	107	1305884.50250001			113.74847585		209.77500000

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	173.02675926	0.01	0.9082
SEEDING	2	38028.83388890	1.47	0.2355
MULCH	2	34807.93388890	1.35	0.2657
SUBSTRAT*SEEDING	2	854.99462964	0.03	0.9675
SUBSTRAT*MULCH	2	8394.06907408	0.32	0.7238
SEEDING*MULCH	4	19255.89888889	0.37	0.8280
SUBSTRA*SEEDIN*MULCH	4	39885.32703702	0.77	0.5471

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	34807.93388890	4.15	0.1943

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	38028.83388890	44.48	0.0220

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	19255.89888889	0.48	0.7510

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE: TOTAL

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	129344.82407409	7608.51906318	0.60	0.8876	0.101085	52.5835
ERROR	90	1150219.90666666	12780.22118519		STD DEV		TOTAL MEAN
CORRECTED TOTAL	107	1279564.73074075			113.04964036		214.99074074

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SUBSTRAT	1	838.89814815	0.07	0.7984
SEEDING	2	22890.70129630	0.90	0.4120
MULCH	2	32323.12018519	1.26	0.2873
SUBSTRAT*SEEDING	2	1051.42129630	0.04	0.9597
SUBSTRAT*MULCH	2	12096.79129630	0.47	0.6245
SEEDING*MULCH	4	22472.06259260	0.44	0.7797
SUBSTRA*SEEDIN*MULCH	4	37671.82925924	0.74	0.5692

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
MULCH	2	32323.12018519	2.67	0.2723

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRAT*SEEDING AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING	2	22890.70129630	21.77	0.0439

TESTS OF HYPOTHESES USING THE ANOVA MS FOR SUBSTRA*SEEDIN*MULCH AS AN ERROR TERM

SOURCE	DF	ANOVA SS	F VALUE	PR > F
SEEDING*MULCH	4	22472.06259260	0.60	0.6855

Form 1279–3
(June 1984)

BORROWE

IN 859 .C64
No
Modular deve
monitoring

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